SLV-SE100/SE200/SE250/SE300/ SE400/SE450/SX100/SX250

RMT-V257/V257A/V257B/V257C/V287

SERVICE MANUAL

AEP Model

SLV-SE100A1/A2/K,SE200V1/V2, SE250B/D/P,SE300D1/D2, SE400K,SE450B/D/K/P, SX100K,SX250D

UK Model

SLV-SE200G/I,SE300G

East European Model

Russian Model

SLV-SE100K,SE400K, SE450K,SX100K

Photo : SLV-SE450D
RMT-V257B

VHS

SHOWVIEW®
(Except UK Model)

VIDEOPlus+
(UK Model only)

S MECHANISM

Refer to the SERVICE MANUAL of VHS MECHANICAL ADJUSTMENT Ⅵ for MECHANICAL ADJUSTMENTS. (9-921-647-11)

The abbreviations of SE100/SE200/SE250/SE300/SE400/SE450/SX100/SX250 contained in this service manual are indicated when these models are common to all their corresponding models as given below.

Abbreviated models name	SE100	SE200	SE250	SE300	SE400	SE450	SX100	SX250
All models name	SE100A1	SE200G	SE250B	SE300D1	SE400K	SE450B	SX100K	SX250D
SLV-	SE100A2	SE200I	SE250D	SE300D2		SE450D		
	SE100K	SE200V1	SE250P	SE300G		SE450K		
		SE200V2				SE450P		

SPECIFICATIONS

System

Channel coverage
SLV-SE100K,SE400K,SE450K,SX100K:
PAL (B/G, D/K)
VHF E2–E12, R1–R12
UHF E21–E69, R21–R69
CATV S1–S41, S01–S05
SLV-SE200G/I, SE300G:
PAL (I)
VHF IA to IJ, SA10 to SA13 (SLV-SE200I only)
UHF B21 to B69
CATV S01 to S05, S1 to S20 (SLV-SE200I only)
HYPER S21 to S41 (SLV-SE200I only)
SLV-SE100A1/A2, SE200V1/V2, SE250D/P, SE300D1/D2, SE450D/P, SX250D:
PAL (B/G)
VHF E2 to E12
Canaux VHF italiens A to H
UHF E21 to E69
CATV S01 to S05, S1 to S20
HYPER S21 to S41
SLV-SE250B,SE450B:
SECAM (L):
VHF F2 to F10
UHF F21 to F69
CATV B to Q
HYPER S21 to S41
PAL (B/G):
VHF E2 to E12
Canaux VHF italiens A to H
UHF E21 to E69
CATV S01 to S05, S1 to S20
HYPER S21 to S41
RF output signal
UHF channels 21–69
Aerial out
75-ohm asymmetrical aerial socket

Tape speed
SP: PAL/MESECAM 23.39 mm/s
NTSC 33.35 mm/s
(SLV-SE250B,SE450B only)
SECAM 23,39 mm/s (recording/playback)
MESECAM 23,39 mm/s (playback only)
LP*: PAL/MESECAM 11.70 mm/s
(playback only, except: SLV-SE200G/I, SE300G)
(recording/playback: SLV-SE200G/I, SE300G)
NTSC 16.67 mm/s (playback only)
(SLV-SE450B only)
SECAM 11,70 mm/s (recording/playback)
MESECAM 11,70 mm/s (playback only)
EP*: NTSC 11.12 mm/s (playback only)
(SLV-SE200G/I, SE250D/P, SE300D1/D2/G, SE450B/D/P, SX250D)
Maximum recording/playback time
10 hrs. in LP mode (with E300 tape)
Fast-forward and rewind time
Approx. 3 min. (with E180 tape)

— Continued on next page —

VIDEO CASSETTE RECORDER

SONY®

Inputs and outputs

☞LINE-1 (TV)
- 21-pin
- Video input: pin 20
- Audio input: pins 2 and 6
- Video output: pin 19
- Audio output: pins 1 and 3

SLV-SE250B/D/P, SE450B/D/P, SX250D:
DECODER/☜LINE-2 IN
- 21-pin
- Video input: pin 20
- Audio input: pins 2 and 6

SLV-SE300D1/D2:
DECODER/☜LINE-3 IN
- 21-pin
- Video input: pin 20
- Audio input: pins 2 and 6

SLV-SE300D1/D2/G:
LINE-2 IN
- VIDEO IN, phono jack (1)
- Input signal: 1 Vp-p, 75 ohms, unbalanced, sync negative
- AUDIO IN, phono jack (1)
- Input level: 327 mVrms
- Input impedance: more than 47 kilohms

SLV-SE300G:
LINE-3 IN
- 21-pin
- Video input: pin 20
- Audio input: pins 2 and 6

General

Power requirements
- 220 – 240 V AC, 50 Hz

Power consumption
- 18 W

Operating temperature
- 5°C to 40°C

Storage temperature
- –20°C to 60°C

Dimensions
- Approx. 355 × 96 × 285 mm (w/h/d)
- (Approx. 14 × 3 7/8 × 11 1/4 inches) including projecting parts and controls

Mass
- Approx. 3.6 kg (Approx. 7 lb 15 oz.)

Supplied accessories

Remote commander (1)
R6 (size AA) batteries (2)
Aerial cable (1)

Design and specifications are subject to change without notice.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer.

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.
3. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
4. Look for parts which, through functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
5. Check the B+ voltage to see it is at the values specified.
6. Flexible Circuit Board Repairing
   - Keep the temperature of the soldering iron around 270˚C during repairing.
   - Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
   - Be careful not to apply force on the conductor when soldering or unsoldering.

TABLE OF CONTENTS

SERVICE NOTE

1. ERROR CODE INDICATION ····· 4 ·····

1 GENERAL

Getting Started ····· 1-1 ·····
- Step 1 : Unpacking ····· 1-1 ·····
- Step 2 : Setting up the remote commander ····· 1-1 ···
- Step 3 : Connecting the VCR ····· 1-2 ·····
- Step 4 : Tuning your TV to the VCR ····· 1-2 ·····
- Step 5 : Setting up the VCR with the Auto Set Up function ··1-3
- Step 6 : Setting the clock ····· 1-4 ·····
- Selecting a language ····· 1-5 ·····
- Presetting channels ····· 1-5 ·····
- Changing/disabling programme positions ····· 1-6 ···

Basic Operations ····· 1-8 ·····
- Playing a tape ····· 1-8 ·····
- Recording TV programmes ····· 1-9 ·····
- Recording TV programmes using the ShowView system ···1-10
- Recording TV programmes using the timer ····· 1-11

Additional Operations ····· 1-12 ·····
- Playing/searching at various speeds ····· 1-12 ···
- Setting the recording duration time ····· 1-12 ···
- Checking/changing/cancelling timer settings ····· 1-12
- Searching using the Smart Search function ····· 1-13
- Adjusting the picture ····· 1-14 ·····
- Changing menu options ····· 1-14 ·····
- Editing with another VCR ····· 1-15 ·····

Additional Information ····· 1-15 ·····
- Troubleshooting ····· 1-15 ·····
- Index to parts and controls ····· 1-16 ·····

2 DISASSEMBLY

2-1. CASE, FRONT PANEL BLOCK ASSEMBLY ····· 2-1
2-2. KK-22 BOARD (SE300, SE450B/D/P), JK-179 BOARD (SE300) ····· 2-1 ·····
2-3. REAR PANEL ····· 2-2 ·····
2-4. POWER BLOCK, MA-372 BOARD ····· 2-2 ···
2-5. MECHANISM DECK ····· 2-3 ·····
2-6. INTERNAL VIEWS ····· 2-4 ·····
2-7. CIRCUIT BOARDS LOCATION ····· 2-5 ····

3 BLOCK DIAGRAMS

3-1. OVERALL BLOCK DIAGRAM ····· 3-1 ·····
3-2. VIDEO BLOCK DIAGRAM ····· 3-3 ·····
3-3. SERVO/SYSTEM CONTROL BLOCK DIAGRAM ····3-5
3-4. AUDIO BLOCK DIAGRAM ····· 3-7 ·····
3-5. POWER BLOCK DIAGRAM ····· 3-9 ·····

4 PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

4-1. FRAME SCHEMATIC DIAGRAM ····· 4-3 ···
4-2. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS ····· 4-5 ·····
- MA-372 (VIDEO, AUDIO, SERVO/SYSTEM CONTROL, TUNER, POWER SUPPLY) PRINTED WIRING BOARD ····· 4-5 ··
- MA-372 (1/10)(REC/PB HEAD AMP) SCHEMA)TIC DIAGRAM ····· 4-7 ···
- MA-372 (2/10)(SECAM PROCESSOR) SCHEMATIC DIAGRAM ····· 4-9 ···
- MA-372 (3/10)(VPD/PDC) SCHEMATIC DIAGRAM ····· 4-11 ·
- MA-372 (4/10)(Y/C, AUDIO PROCESSOR) SCHEMATIC DIAGRAM ····· 4-13 ·
- MA-372 (5/10)(SERVO/SYSTEM CONTROL) SCHEMATIC DIAGRAM ····· 4-15 ·
- MA-372 (6/10)(USER CONTROL) SCHEMATIC DIAGRAM ····· 4-17 ·
- MA-372 (7/10)(INPUT/OUTPUT) SCHEMATIC DIAGRAM ····· 4-19 ·
- MA-372 (8/10)(C+ SWITCH) SCHEMATIC DIAGRAM ····· 4-21 ·
- MA-372 (9/10)(TUNER) SCHEMATIC DIAGRAM ····· 4-23 ·
- MA-372 (10/10)(POWER SUPPLY) SCHEMATIC DIAGRAM ····· 4-25 ·
- JK-179 (LINE-2 IN) PRINTED WIRING BOARD AND SCHEMATIC DIAGRAM ····· 4-27 ·
- KK-22 (DIAL TIMER) PRINTED WIRING BOARD AND SCHEMATIC DIAGRAM ····· 4-27 ·
- POWER SUPPLY BLOCK PRINTED WIRING BOARD ····· 4-28
- POWER SUPPLY BLOCK SCHEMATIC DIAGRAM ····· 4-29 ·

5 INTERFACE, IC PIN FUNCTION DESCRIPTION

5-1. SYSTEM CONTROL — VIDEO/RP BLOCK INTERFACE (MA-372 BOARD IC162) ····· 5-1 ··
5-2. SYSTEM CONTROL — SERVO PERIPHERAL CIRCUIT INTERFACE (MA-372 BOARD IC162) ····· 5-1
5-3. SYSTEM CONTROL — MECHANISM BLOCK INTERFACE (MA-372 BOARD IC162) ····· 5-2 ··
5-4. SYSTEM CONTROL — SYSTEM CONTROL PERIPHERAL CIRCUIT INTERFACE (MA-372 BOARD IC162) ····· 5-2 ·····
5-5. SYSTEM CONTROL — AUDIO BLOCK INTERFACE (MA-372 BOARD IC162) ····· 5-2 ·····
5-6. SERVO/SYSTEM CONTROL MICROPROCESSOR PIN FUNCTIONS (MA-372 BOARD IC162) ····· 5-3
5-7. MODE CONTROL PIN FUNCTIONS (MA-372 BOARD IC420) ····· 5-5 ·····

6 ADJUSTMENTS

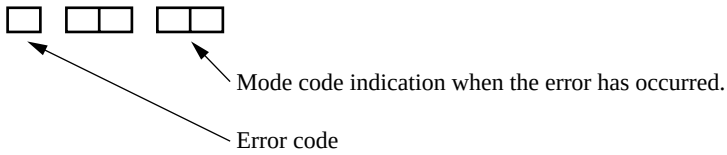
6-1. MECHANICAL ADJUSTMENTS ····· 6-1 ····
6-2. ELECTRICAL ADJUSTMENTS ····· 6-1 ····
2-1. PREPARATION BEFORE ADJUSTMENT ····· 6-1
2-1-1. Equipment Required ····· 6-1 ·····
2-1-2. Equipment Connection ····· 6-1 ·····
2-1-3. Set-up of Adjustment ····· 6-1 ·····
2-1-4. Alignment Tape ····· 6-1 ·····
2-1-5. Input/Output Levels and Impedance ····· 6-2 ···
2-1-6. Adjustment Sequence ····· 6-2 ·····
2-2. POWER SUPPLY CHECK ····· 6-2 ·····
2-2-1. Output Voltage Check (MA-372 Board) ····· 6-2 ··
2-3. SERVO SYSTEM CHECK ····· 6-3 ·····
2-3-1. RF Switching Position Adjustment (MA-372 Board) ····6-3
2-4. AUDIO SYSTEM ADJUSTMENT ····· 6-3 ····
2-4-1. Normal Audio System Adjustment ····· 6-3 ····
2-4-2. ACE Head Adjustment ····· 6-3 ·····
2-4-3. E-E Output Level Check ····· 6-3 ·····
2-4-4. Frequency Response Check ····· 6-3 ·····
2-5. ADJUSTING PARTS LOCATION DIAGRAM ····· 6-4

7 REPAIR PARTS LIST

7-1. EXPLODED VIEWS ····· 7-1 ·····
7-1-1. FRONT PANEL AND UPPER CASE SECTION ····· 7-1
7-1-2. CHASSIS SECTION ····· 7-2 ·····
7-1-3. MECHANISM DECK SECTION-1 ····· 7-3 ···
7-1-4. MECHANISM DECK SECTION-2 ····· 7-4 ···
7-1-5. MECHANISM DECK SECTION-3 ····· 7-5 ···
7-2. ELECTRICAL PARTS LIST ····· 7-6 ·····

1. ERROR CODE INDICATION

- Error codes are indicated using the lower 5 digits in the fluorescent display tube.
  "At this time, Colon ":" between character is not indicated."



ERROR CODE

0	No error
1	Cam encoder error Loading direction
2	Cam encoder error Unloading direction
3	T reel error
4	S reel error
5	Capstan error
6	Drum error
7	Error on initializing
8	Cassette loading error
9	Reserve

MODE CODE

0	Power-on eject	10	FWD x1	20	REW play
1	Power-on initial	11	FWD x2	21	Cas. loading
2	Power-off eject	12	CUE	22	Tape loading
3	Power-off stop	13	PB-pause	23	Power-off loading
4	FF	14	RVS-pause	24	Mecha. error (Power on)
5	REW	15	RVS x1	25	Power-on eject initial
6	REC	16	RVS x2	26	Power-off eject initial
7	REC- pause	17	REV	27	APC REC
8	Power-on stop	18	Power-off initial	28	Cas. loading
9	PB	19	Mecha. error (Power off)		(No auto PB check)

SECTION 1
GENERAL

This section is extracted from instruction manual. (SLV-SE100K/SX100K/SE400K/SE450K model)(3-868-344-11)

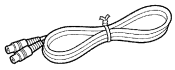
Getting Started

Step 1 : Unpacking

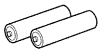
Check that you have received the following items with the VCR:

- Remote commander

- Aerial cable



- R6 (size AA) batteries



Check your model name

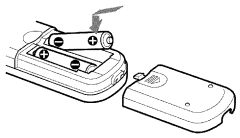
The instructions in this manual are for the 4 models: SLV-SE100K, SX100K, SE400K and SE450K. Check your model number by looking at the rear panel of your VCR. SLV-SE450K is the model used for illustration purposes. Any difference in operation is clearly indicated in the text, for example, "SLV-SE450K only."

Step 2 : Setting up the remote commander

Inserting the batteries

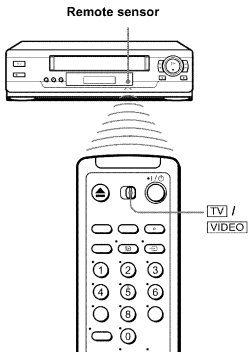
Insert two R6 (size AA) batteries by matching the + and – on the batteries to the diagram inside the battery compartment.

Insert the negative (–) end first, then push in and down until the positive (+) end clicks into position.



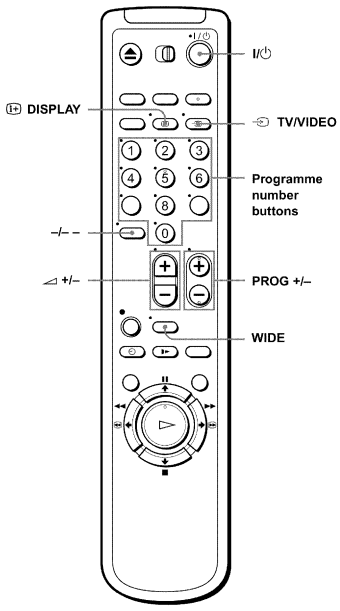
Using the remote commander

You can use this remote commander to operate this VCR and a Sony TV. Buttons on the remote commander marked with a dot (•) can be used to operate your Sony TV. If the TV does not have the R symbol near the remote sensor, this remote commander will not operate the TV.



To operate	Set TV / VIDEO to
the VCR	VIDEO and point at the remote sensor at the VCR
a Sony TV	TV and point at the remote sensor at the TV

continued



TV control buttons

To	Press
Set the TV to standby mode	I/⏻
Select an input source: aerial in or line in	TV/VIDEO
Select the TV's programme position	Programme number buttons, –/– –, PROG +/–
Adjust the volume of the TV	+/–
Call up the on-screen display	DISPLAY
Switch to/from wide mode of a Sony wide TV	WIDE

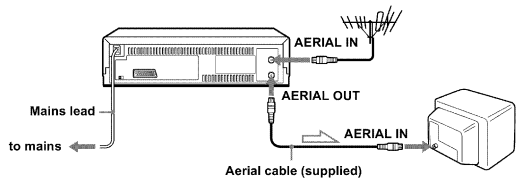
Notes

- With normal use, the batteries should last about three to six months.
- If you do not use the remote commander for an extended period of time, remove the batteries to avoid possible damage from battery leakage.
- Do not use a new battery together with an old one.
- Do not use different types of batteries together.
- Some buttons may not work with certain Sony TVs.

Step 3 : Connecting the VCR

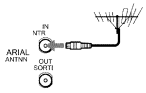
If your TV has a Scart (EURO-AV) connector, see page 9.

If your TV does not have a Scart (EURO-AV) connector

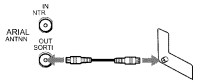


: Signal flow

1 Disconnect the aerial cable from your TV and connect it to AERIAL IN on the rear panel of the VCR.



2 Connect AERIAL OUT of the VCR and the aerial input of your TV using the supplied aerial cable.

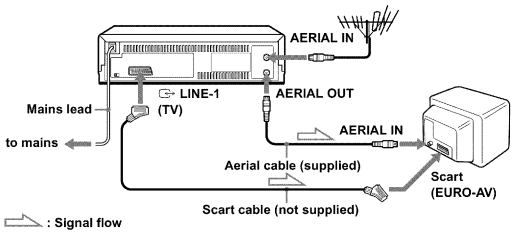


3 Connect the mains lead to the mains.

Note

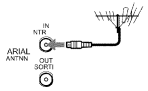
- When you connect the VCR and your TV only with an aerial cable, you have to tune your TV to the VCR (see page 11).

If your TV has a Scart (EURO-AV) connector

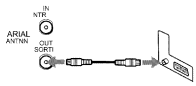


: Signal flow

1 Disconnect the aerial cable from your TV and connect it to AERIAL IN on the rear panel of the VCR.

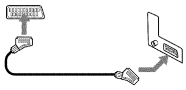


2 Connect AERIAL OUT of the VCR and the aerial input of your TV using the supplied aerial cable.



3 Connect LINE-1 (TV) on the VCR and the Scart (EURO-AV) connector on the TV with the optional Scart cable.

This connection improves picture and sound quality. Whenever you want to watch the VCR picture, press TV/VIDEO to display the VIDEO indicator in the display window.



4 Connect the mains lead to the mains.

Note

- If the TV is connected to the LINE-1 (TV) connector, setting the RF channel to OFF is recommended. In the OFF position, only the signal from the aerial is output through the AERIAL OUT connector (see page 13).

continued

About the SMARTLINK features (SLV-SE450K only)

If the connected TV complies with SMARTLINK, MEGALOGIC*1, EASYLINK*2, Q-Link*3, EURO VIEW LINK*4, or T-V LINK*5, this VCR automatically runs the SMARTLINK function after you complete the steps on the previous page (the SMARTLINK indicator appears in the VCR's display window when you turn on the TV). You can enjoy the following SMARTLINK features.

SMARTLINK

- Preset Download
  You can download your TV tuner preset data to this VCR and tune the VCR according to that data in Auto Set Up. This greatly simplifies the Auto Set Up procedure. Be careful not to disconnect the cables or exit the Auto Set Up function during the procedure.
  See "Setting up the VCR with the Auto Set Up function" on page 14.
- TV Direct Rec
  You can easily record what you are watching on the TV. For details, see "Recording what you are watching on the TV (TV Direct Rec) (SLV-SE450K only)" on page 39.
- One Touch Play
  With One Touch Play, you can start playback automatically without turning on the TV. For details, see "Starting playback automatically with one button (One Touch Play) (SLV-SE450K only)" on page 35.
- One Touch Menu
  You can turn on the VCR and TV, set the TV to the video channel, and display the VCR's on-screen display automatically by pressing MENU on the remote commander.
- One Touch Timer
  You can turn on the VCR and TV, set the TV to the video channel, and display the timer recording menu (the TIMER METHOD menu, the TIMER menu, or the SHOWVIEW menu) automatically by pressing TIMER on the remote commander.
  You can set which timer recording menu is displayed using TIMER OPTIONS in the OPTIONS-2 menu (see page 59).
- Automatic Power Off
  You can have the VCR turn off automatically, if the VCR is not used after you turn off the TV.

*1 "MEGALOGIC" is a registered trademark of Grundig Corporation.
*2 "EASYLINK" is a trademark of Philips Corporation.
*3 "Q-Link" is a trademark of Panasonic Corporation.
*4 "EURO VIEW LINK" is a trademark of Toshiba Corporation.
*5 "T-V LINK" is a trademark of JVC Corporation.

Note

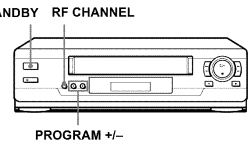
- Not all TVs respond to the functions above.

Step 4 : Tuning your TV to the VCR

If your TV has a Scart (EURO-AV) connector, see page 13.

If your TV does not have a Scart (EURO-AV) connector

Follow the steps below so that your TV will properly receive the video signals from your VCR.

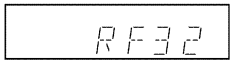


1 ONSTAN I/⏻ Press I/⏻ ON/STANDBY to turn on the VCR.

2 AUTO ST UP R CANNL Press RF CHANNEL on the VCR lightly.

The factory-preset RF channel appears in the display window.

The VCR signal is output through this channel to the TV.

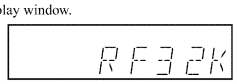


3 Turn on your TV and select a programme position for the VCR picture.

This programme position will now be referred to as the video channel.

4 AUTO ST UP R CANNL Press RF CHANNEL.

The TV system appears in the display window.



continued

5 – PROGRA + TRACING

Press PROGRAM +/– (repeatedly) to select the appropriate TV system for your area. Select "G" for the B/G TV system, or "K" for the D/K TV system.

6

Tune the TV to the same channel shown in the VCR display window so that the picture on the right appears clearly on the TV screen.

Refer to your TV manual for TV tuning instructions.

If you select the wrong TV system in step 5, the picture on the right may not appear. Select the appropriate TV system and tune the TV again.

If the picture does not appear clearly, see "To obtain a clear picture from the VCR" below.

7 AUTO ST UP R CANNL

Press RF CHANNEL.

You have now tuned your TV to the VCR. Whenever you want to play a tape, set the TV to the video channel.

To check to see if the TV tuning is correct

Set the TV to the video channel and press PROGRAM +/– on the VCR. If the TV screen changes to a different programme each time you press PROGRAM +/–, the TV tuning is correct.

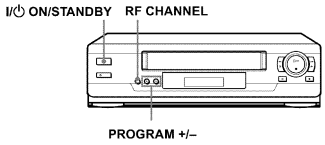
To obtain a clear picture from the VCR

If the screen does not appear clearly in step 6 above, go to step 7 to finish this procedure once. Then start again from step 2. After pressing RF CHANNEL in step 2, press PROGRAM +/– while the RF channel is displayed, so that another RF channel appears. Then tune the TV to the new RF channel so that a clear picture appears.

Note

- If you set the wrong TV system, you may have no sound or sound may be distorted.

If your TV has a Scart (EURO-AV) connector



1 ONSTAN I/⏻

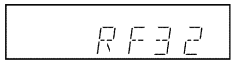
Press I/⏻ ON/STANDBY to turn on the VCR.

2 AUTO ST UP R CANNL

Press RF CHANNEL on the VCR lightly.

The factory-preset RF channel appears in the display window.

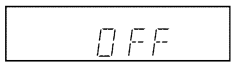
The VCR signal is output through this channel to the TV.



3 – PROGRA + TRACING

AUTO ST UP R CANNL

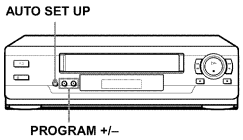
Use the PROGRAM +/– buttons to set the RF channel to OFF, and press RF CHANNEL again.



RF channel set up is complete.

Step 5 : Setting up the VCR with the Auto Set Up function

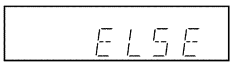
Before using the VCR for the first time, set up the VCR using the Auto Set Up function. With this function, you can set the language for the on-screen display, TV channels, guide channels for the ShowView system*, and VCR clock* automatically.



1 AUTO ST UP R CANNL

Hold down AUTO SET UP on the VCR for more than three seconds.

The VCR automatically turns on, and the country abbreviation appears in the display window.



2 – PROGRA + TRACING

Press PROGRAM +/– to select the abbreviation of your country from the table on page 15.

For some countries, there is a selection of languages to choose from.

If your country does not appear, select ELSE.

3 AUTO ST UP R CANNL

Press AUTO SET UP lightly.

The VCR starts searching for all of the receivable channels and presets them according to the TV system you selected in "Tuning your TV to the VCR" on page 11.

If you want to change the order of the channels or disable unwanted programme positions, see "Changing/disabling programme positions" on page 27.

If you use the SMARTLINK connection (SLV-SE450K only), the Preset Download function starts and the SMARTLINK indicator flashes in the display window during download.

After the search or download is complete, the current time appears in the display window for any stations that transmit a time signal.

The abbreviations of the countries and languages are as follows:

Abbreviation	Country	Language
CZ	Checho	Czech
HUN	Hungary	Hungarian
PL	Poland	Polish
SK	Slovakia	Slovak
TR	Turkey	Turkish
RUS	Russia	Russian
ELSE	Other countries	English

To cancel the Auto Set Up function

Press AUTO SET UP.

Tip

- If you want to change the language for the on-screen display from the one preset in the Auto Set Up function, see page 21.

Notes

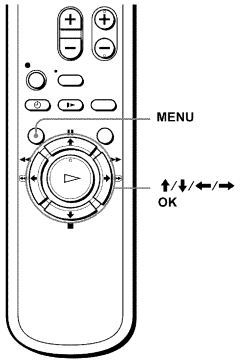
- If you stop the Auto Set Up function during step 3, you must repeat set up from step 1.
- Whenever you operate the Auto Set Up function, some of the settings (ShowView*, timer, etc.) will be reset. If this happens, you have to set them again.

* SLV-SE450K only

Step 6 : Setting the clock

You must set the time and date on the VCR to use the timer features properly.

The Auto Clock Set function (SLV-SE450K only) works only if a station in your area is broadcasting a time signal. If the Auto Set Up function did not set the clock correctly for your local area, try another station for the Auto Clock Set function.

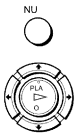


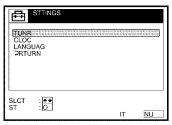
Setting the clock manually

Before you start...

- Turn on the VCR and the TV.
- Set the TV to the video channel.

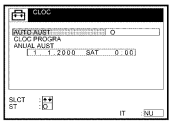
1 Press MENU, then press ↑/↓ to highlight SETTINGS and press OK.



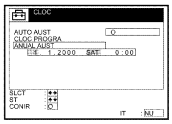


2 Press ↑/↓ to highlight CLOCK, then press OK.

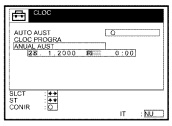
For SLV-SE100K/SX100K and SE400K, only the clock setting menu appears. Skip the next step and go to step 4.



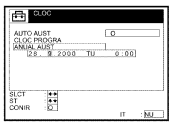
3 Press ↑/↓ to highlight MANUAL ADJUST, then press OK.



4 Press ↑/↓ to set the day.

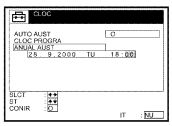


5 Press → to highlight the month and set the month pressing ↑/↓.

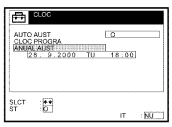


6 Set the year, hour, and minutes in sequence, pressing → to highlight the item to be set, and press ↑/↓ to select the digits.

The day of the week is set automatically.



7 Press OK to start the clock.



continued

8 Press MENU to exit the menu.

Tips

- To change the digits while setting, press ← to return to the item to be changed, and select the digits by pressing ↑/↓.
- If you want to return to the previous menu, highlight RETURN and press OK.

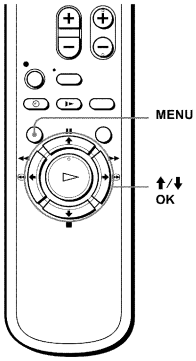
Note

- The menu disappears automatically if you don't proceed for more than a few minutes.

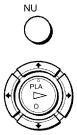
Changing the station for the Auto Clock Set function (SLV-SE450K only)

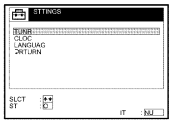
Before you start...

- Turn on the VCR and the TV.
- Set the TV to the video channel.



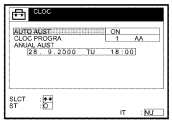
1 Press MENU, then press ↑/↓ to highlight SETTINGS and press OK.



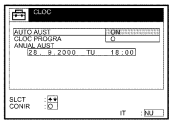


2 Press ↑/↓ to highlight CLOCK, then press OK.

AUTO ADJUST is highlighted.

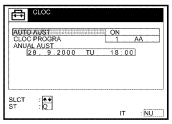


3 Press OK.

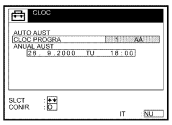


continued

4 Press ↑/↓ to highlight ON, then press OK.

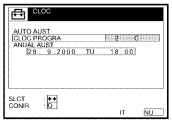


5 Press ↓ to highlight CLOCK PROGRAM, then press OK.



6 Press ↑/↓ repeatedly until the programme position of the station that carries a time signal appears.

If the VCR does not receive a time signal from any station, AUTO ADJUST returns to OFF automatically.



7 Press MENU to exit the menu.

Tips

- If you set AUTO ADJUST to ON, the Auto Clock Set function is activated whenever the VCR is turned off. The time is adjusted automatically by making reference to the time signal from the station whose programme position is displayed in the "CLOCK PROGRAM" row. If you do not need the Auto Clock Set, select OFF.
- If you want to return to the previous menu, highlight RETURN and press OK.

Note

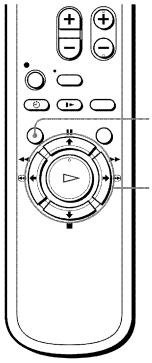
- The menu disappears automatically if you don't proceed for more than a few minutes.

Selecting a language

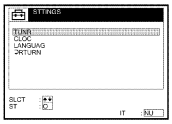
You can change the on-screen display language from the one you selected with the Auto Set Up function.

Before you start...

- Turn on the VCR and the TV.
- Set the TV to the video channel.



1 Press MENU, then press ↑/↓ to highlight SETTINGS and press OK.



2 Press ↑/↓ to highlight LANGUAGE, then press OK.

continued

3 Press ↑/↓ to highlight the desired language, then press OK.

4 Press MENU to exit the menu.

Tip

- If you want to return to the previous menu, highlight RETURN and press OK.

Note

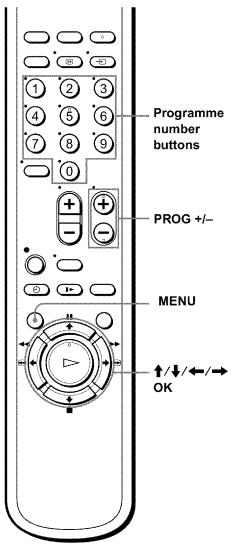
- The menu disappears automatically if you don't proceed for more than a few minutes.

Presetting channels

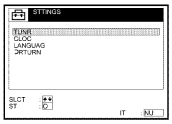
If some channels could not be preset using the Auto Set Up function, you can preset them manually.

Before you start...

- Turn on the VCR and the TV.
- Set the TV to the video channel.

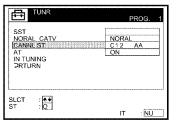


1 Press MENU, then press ↑/↓ to highlight SETTINGS and press OK.

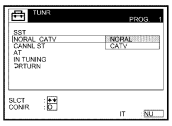


continued

2 Press ↑/↓ to highlight TUNER, then press OK.

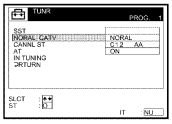


3 Press ↑/↓ to highlight NORMAL/CATV, then press OK.



4 Press ↑/↓ to highlight NORMAL, then press OK.

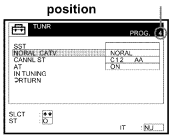
To preset CATV (Cable Television) channels, select CATV.



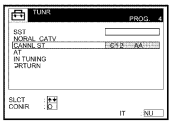
5 • PROG

Press PROG +/– to select the programme position.

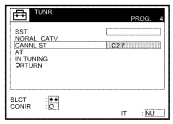
Selected programme position



6 Press ↑/↓ to highlight CHANNEL SET, then press OK.



7 Press ↑/↓ repeatedly until the channel you want is displayed.

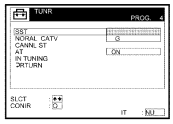


The channels appear in the following order:

B/G TV system		D/K TV system	
Channel number in the CHANNEL SET field	**Receivable Channel**	**Channel number in the CHANNEL SET field**	**Receivable Channel**
C02	E2	C02	R1
C03	E3	C05	R6
C04	E4	C06	R7
C05	E5	C12	R12
C06	E6	C13	R2
C07	E7	C14	R3
C08	E8	C15	R4
C09	E9	C16	R5
C10	E10	C17	R8
C11	E11	C18	R9
C12	E12	C19	R10
C21–C69	E21–E69	C20	R11
S01–S41	S1–S41	C21–C69	R21–R69
S42–S46	S01–S05		

If you know the number of the channel you want, press the programme number buttons. For example, for channel 5, first press "0" and then press "5."

8 If the TV sound is distorted or noisy, press ↑/↓ to highlight SYSTEM and press OK. Then press ↑/↓ to select B/G or D/K so that you get better sound.



9 To preset another programme position, repeat steps 5 through 7.

continued

10 NU

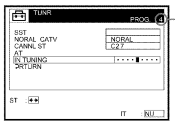
Press MENU to exit the menu.

If the picture is not clear

Normally, the Auto Fine Tuning (AFT) function automatically tunes in channels clearly. However, if the picture is not clear, you may also use the manual tuning function.

1. Press PROG +/– or the programme number buttons to select the programme position for which you cannot obtain a clear picture.
2. Press MENU, then select SETTINGS and press OK.
3. Select TUNER, then press OK.
4. Select FINE TUNING, then press OK.

   The fine tuning meter appears.



Selected programme position

5. Press ←/→ to get a clearer picture, then press MENU to exit the menu.

   Note that the AFT (Auto Fine Tuning) setting switches to OFF.

Tip

- If you want to return to the previous menu, highlight RETURN and press OK.

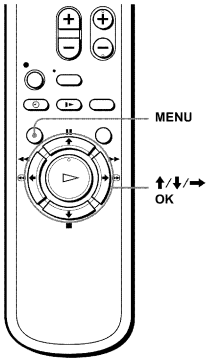
Notes

- The menu disappears automatically if you don't proceed for more than a few minutes.
- When adjusting FINE TUNING, the menu may become difficult to read due to interference from the picture being received.

Changing/disabling programme positions

After setting the channels, you can change the programme positions as you like. If any programme positions are unused or contain unwanted channels, you can disable them.

You can also change the station names (SLV-SE450K only). If the station names are not displayed, you can enter them manually.



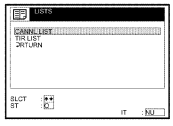
Changing programme positions

Before you start...

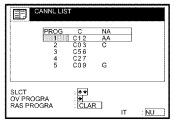
- Turn on the VCR and the TV.
- Set the TV to the video channel.

1 NU

Press MENU, then press ↑/↓ to highlight LISTS and press OK.



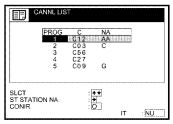
2 Press ↑/↓ to highlight CHANNEL LIST, then press OK.



continued

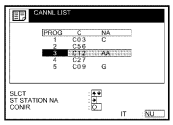
3 Press ↑/↓ to highlight the row which you want to change the programme position, then press →.

To display other pages for programme positions 6 to 60, press ↑/↓ repeatedly.



4 Press ↑/↓ until the selected channel row moves to the desired programme position.

The selected channel is inserted at the new programme position and the intermediate channels are displaced to fill the gap.



5 Press OK to confirm the setting.

6 To change the programme position of another station, repeat steps 3 through 5.

7 NU

Press MENU to exit the menu.

Tip

- If you want to return to the previous menu, highlight RETURN and press OK.

Note

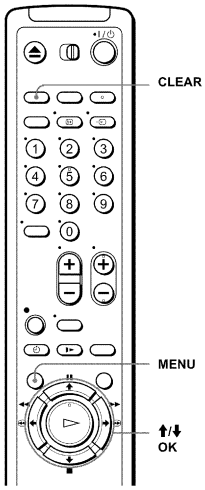
- The menu disappears automatically if you don't proceed for more than a few minutes.

Disabling unwanted programme positions

After presetting channels, you can disable unused programme positions. The disabled positions will be skipped later when you press the PROG +/– buttons.

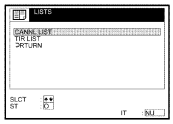
Before you start...

- Turn on the VCR and the TV.
- Set the TV to the video channel.

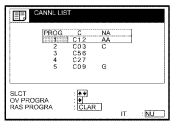


1 NU

Press MENU, then press ↑/↓ to highlight LISTS, and press OK.

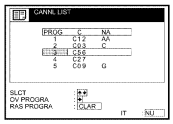


2 Press ↑/↓ to highlight CHANNEL LIST, then press OK.



continued

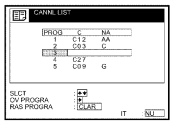
3 Press ↑/↓ to highlight the row which you want to disable.



4 CLAR

Press CLEAR.

The selected row will be cleared as shown on the right.



5 Repeat steps 3 and 4 for any other programme positions you want to disable.

6 NU

Press MENU to exit the menu.

Tip

- If you want to return to the previous menu, highlight RETURN and press OK.

Notes

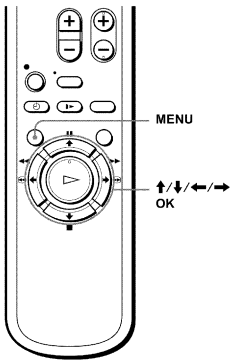
- The menu disappears automatically if you don't proceed for more than a few minutes.
- Be sure to select the programme position you want to disable correctly. If you disable a programme position by mistake, you need to reset that channel manually.

Changing the station names (SLV-SE450K only)

You can change or enter the station names (up to 5 characters). The VCR must receive channel information (for instance, SMARTLINK information) for station names to appear automatically.

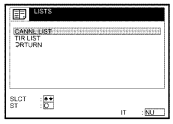
Before you start...

- Turn on the VCR and the TV.
- Set the TV to the video channel.

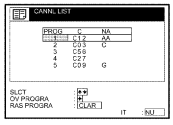


1 NU

Press MENU, then press ↑/↓ to highlight LISTS and press OK.

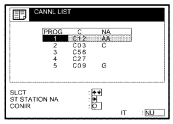


2 Press ↑/↓ to highlight CHANNEL LIST, then press OK.



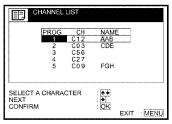
3 Press ↑/↓ to highlight the row which you want to change or enter the station name, then press →.

To display other pages for programme positions 6 to 60, press ↑/↓ repeatedly.



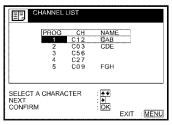
continued

4 Press ➡.



5 Enter the station name.

1 Press ⬆/⬇ to select a character.
Each time you press ⬆, the character changes as shown below.
A → B → ... → Z → a → b → ... → z → 0 → 1 → ... → 9 → (symbols) → (blank space) → A



2 Press ➡ to set the next character.
The next space is highlighted.
To correct a character, press ⬅/➡ until the character you want to correct is highlighted, then reset it.

You can set up to 5 characters for the station name.

6 Press OK to confirm the new name.

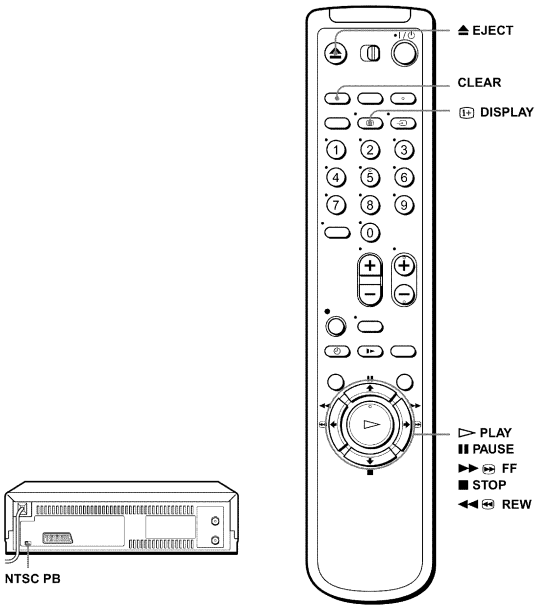
7 MENU

Press MENU to exit the menu.

Tip
- If you want to return to the previous menu, highlight RETURN and press OK.

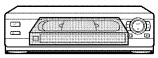
Notes
- The menu disappears automatically if you don't proceed for more than a few minutes.
- If you enter a symbol in step 5, it will appear as a blank space in the display window.

Playing a tape



1 Turn on your TV and set it to the video channel.

2 Insert a tape.
The VCR turns on and starts playing automatically if you insert a tape with its safety tab removed.



continued

3 Press ▷ PLAY.
When the tape reaches the end, it will rewind automatically.

Additional tasks

To	Press
Stop play	■ STOP
Pause play	❚❚ PAUSE
Resume play after pause	❚❚ PAUSE or ▷ PLAY
Fast-forward the tape	▶▶ FF during stop
Rewind the tape	◀◀ REW during stop
Eject the tape	⏏ EJECT

To set the colour system

If the playback picture has no colour, or streaks appear during playback, set COLOUR SYSTEM in the OPTIONS-1 menu to conform to the system that the tape was recorded in (see page 59). (Normally set the option to AUTO.)

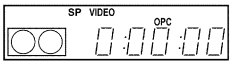
To play an NTSC-recorded tape

Set NTSC PB at the rear of the VCR according to the colour system of your TV.

When your TV is	Set NTSC PB to
PAL only	ON PAL TV
PAL and NTSC	NTSC 4.43

To use the time counter

Press CLEAR at the point on the tape that you want to find later. The counter in the display window resets to "0:00:00." Search for the point afterwards by referring to the counter.



To display the counter on the TV screen, press DISPLAY.

Notes
- The counter resets to "0:00:00" whenever a tape is reinserted.
- The counter stops counting when it comes to a portion with no recording.
- The time counter does not appear on the TV screen when using an NTSC-recorded tape.
- Depending on your TV, the following may occur while playing an NTSC-recorded tape:
  – The picture becomes black and white.
  – The picture shakes.
  – No picture appears on the TV screen.
  – Black streaks appear horizontally on the TV screen.
  – The colour density increases or decreases.
- Tapes recoreded in the LP and EP mode cannot be played back on this VCR.*1
- The picture's colour may be affected when playing a MESECAM-recorded tape in the LP mode.*2
- While setting the menu on the TV screen, buttons for playback on the remote commander do not function.

*1 SLV-SE100K/SX100K only
*2 SLV-SE400K/SE450K only

Starting playback automatically with one button (One Touch Play) (SLV-SE450K only)

If you use the SMARTLINK connection, you can turn on the VCR and the TV, set the TV to the video channel, and start playback automatically with one button.

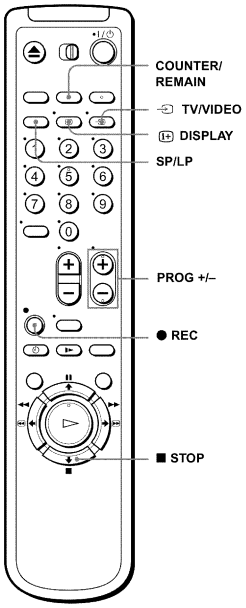
1 Insert a tape.
The VCR automatically turns on.
If you insert a tape with its safety tab removed, the TV turns on and switches to the video channel. Playback starts automatically.

2 Press ▷ PLAY.
The TV turns on and switches to the video channel automatically. Playback starts.

Tip
- When there already is a tape in the VCR, the VCR and the TV turn on, the TV is set to the video channel, and playback starts automatically in one sequence when you press ▷ PLAY.

Note
- When you use the One Touch Play function, leave the TV on or in the standby mode.

Recording TV programmes



1 Turn on your TV and set it to the video channel.

2 Insert a tape with its safety tab in place.

3 • PROG

Press PROG +/– to select the programme position or station name*1 you want to record.

4 SP / LP

Press SP/LP to select the tape speed, SP or LP*2.

LP (Long Play) provides recording time twice as long as SP. However, SP (Standard Play) produces better picture and audio quality.

5 ●REC

Press ● REC to start recording.

The recording indicator lights up red in the display window.

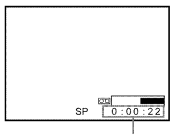
Recording indicator

To stop recording

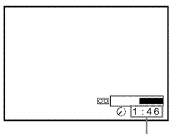
Press ■ STOP.

To check the remaining time

Press DISPLAY. With the display on, press COUNTER/REMAIN to check the remaining time. Each time you press COUNTER/REMAIN, the time counter and the remaining time appear alternately. The ⏲ indicator indicates the remaining time.



Time counter



Remaining time

In order to get an accurate remaining time indication, be sure TAPE LENGTH in the OPTIONS-1 menu is set according to the tape type you use (see page 58).

Basic Operations

continued

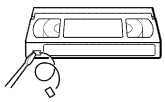
To watch another TV programme while recording

1 Press TV/VIDEO to turn off the VIDEO indicator in the display window.

2 Select another programme position on the TV.

To save a recording

To prevent accidental erasure, break off the safety tab as illustrated. To record on the same tape again, cover the tab hole with adhesive tape.



Safety tab

Tips

- To select a programme position, you can use the programme number buttons on the remote commander. For two-digit numbers, press the –/– – (ten's digit) button followed by the programme number buttons.
- If you connect additional equipment to a LINE connector or jack, you can select the input signal using the INPUT SELECT or PROG +/– buttons.
- The DISPLAY information appears on the TV screen indicating information about the tape, but the information won't be recorded on the tape.
- If you don't want to watch TV while recording, you can turn off the TV.

Notes

- The DISPLAY information does not appear during still (pause) mode or slow-motion playback.
- The DISPLAY information will not appear while playing an NTSC-recorded tape.
- If a tape has portions recorded in both PAL (MESECAM) and NTSC systems, the time counter reading will not be correct. This discrepancy is due to the difference between the counting cycles of the two video systems.
- When you insert a non-standard commercially available tape, the remaining time may not be correct.
- The remaining time is intended for rough measurement only.
- About 30 seconds after the tape begins playback, the tape remaining time will be displayed.
- The station name*1 may not appear if the VCR does not receive station name information signals.

*1 SLV-SE450K only

*2 not available on SLV-SE100K/SX100K

Recording what you are watching on the TV (TV Direct Rec) (SLV-SE450K only)

If you use the SMARTLINK connection, you can easily record what you are watching on the TV (other than tapes being played on the VCR).

1 Insert a tape with its safety tab in place.

2 Press ● REC while you are watching a TV programme or external source.

The VCR automatically turns on, then the TV indicator lights up and the VCR starts recording what you are watching on the TV.

Tips

- The TV indicator appears in the display window after you press ● REC in some situations such as:
  – when you are watching a source connected to the TV's line input, or
  – when the TV tuner preset data for the programme position is different from the data in the VCR tuner preset.
- If there is a tape with its safety tab in place in the VCR, the VCR automatically turns on and starts recording what you are watching on the TV when you press ● REC.
- You can turn the TV Direct Rec function ON and OFF in the OPTIONS-2 menu (see page 59).

Notes

- You cannot record what you are watching using this method when the VCR is in the following modes; pause, timer standby, tuner preset, Auto Set Up, and recording.
- When the TV indicator is lit in the display window, do not turn off the TV nor change the TV programme position. When the TV indicator is not lit, the VCR continues recording the programme even if you change the TV programme position on the TV.

Basic Operations

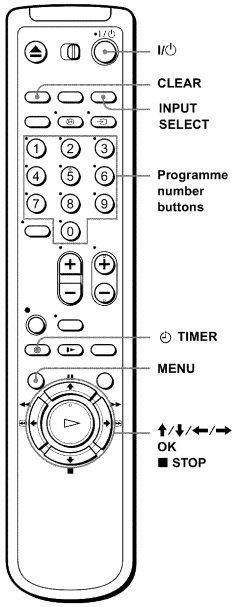
Recording TV programmes using the ShowView system

(SLV-SE450K only)

The ShowView system is the feature that simplifies programming the VCR to make timer recordings. Just enter the ShowView number listed in the TV programme guide. The date, times, and programme position of that programme are set automatically. You can preset a total of eight programmes, including settings made with other timer methods.

Before you start...

- Check that the VCR clock is set to the correct time and date.
- Insert a tape with its safety tab in place. Make sure the tape is longer than the total recording time.
- Turn on your TV and set it to the video channel.
- Set TIMER OPTIONS*1 to SHOWVIEW or VARIABLE in the OPTIONS-2 menu (see page 59).

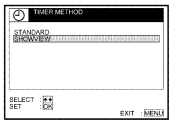


1

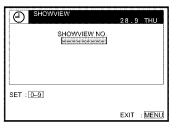
TIMER

Press ⏲ TIMER.

- When you set TIMER OPTIONS to VARIABLE:
  The TIMER METHOD menu appears on the TV screen. Press ↑/↓ to select SHOWVIEW, then press OK.



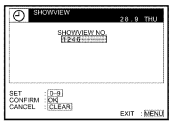
- When you set TIMER OPTIONS to SHOWVIEW:
  The SHOWVIEW menu appears on the TV screen.



2

1 2 3 4 5 6 7 8 9 0

Press the programme number buttons to enter the ShowView number.



CLEAR

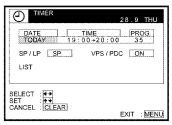
If you make a mistake, press CLEAR and re-enter the correct number.

3

PLAY OK

Press OK.

The date, start and stop times, programme position or station name, tape speed*2, and VPS/PDC setting*1 appear on the TV screen.



- If "– –" appears in the "PROG." (programme) column (this may happen for local broadcasts), you have to set the appropriate programme position manually.
  Press ↑/↓ to select the desired programme position.
  To record from a source connected to the LINE input, press INPUT SELECT to display the connected line in the "PROG." position.
  You will only have to do this operation once for the referred channel. The VCR will then store your setting.

INPUT SELECT

CLEAR

If the information is incorrect, press CLEAR to cancel the setting.

continued

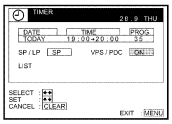
4

PLAY OK

If you want to change the date, tape speed*2, and the VPS/PDC setting*1:

1 Press ←/→ to highlight the item you want to change.

2 Press ↑/↓ to reset it.



- To record the same programme every day or the same day every week, see "Daily/weekly recording" below.
- To use the VPS/PDC function*1, set VPS/PDC to ON.
  For details of the VPS/PDC function, see "Timer recording with VPS/PDC signals" below.

5

MENU

Press MENU to exit the menu.

6

I/⏻

Press I/⏻ to turn off the VCR.

The ⏲ indicator appears in the display window and the VCR stands by for recording.

To stop recording

To stop the VCR while recording, press ■ STOP.

Daily/weekly recording

In step 4 above, press ↓ to select the recording pattern. Each time you press ↓, the indication changes as shown below. Press ↑ to change the indication in reverse order.
TODAY → SUN-SAT (Sunday to Saturday) → MON-SAT (Monday to Saturday) → MON-FRI (Monday to Friday) → SAT (every Saturday) ..... → MON (every Monday) → SUN (every Sunday) → 1 month later → (dates count down) → TOMORROW → TODAY

Timer recording with VPS/PDC signals

Some broadcast systems transmit VPS (Video Programme System) or PDC (Programme Delivery Control) signals with their TV programmes. These signals ensure that your timer recordings are made regardless of broadcast delays, early starts, or broadcast interruptions (when the VPS or PDC indicator in the display window is lit).

To use the VPS/PDC function, set VPS/PDC to ON in step 4 above. You can also use the VPS/PDC function for a source connected to the LINE input.

To use the VCR after setting the timer

To use the VCR before a recording begins, just press I/⏻. The ⏲ indicator turns off and the VCR switches on. Remember to press I/⏻ to reset the VCR to recording standby after using the VCR.

You can also do the following tasks while the VCR is recording:

- Reset the counter (page 34).
- Display tape information on the TV screen (page 37).
- Check the timer settings (page 51).
- Watch another TV programme (page 38).

Tips

- To set the programme position, you can also use the PROG +/– or programme number buttons.
- To set the programme position with a two digit number, press –/– – (ten's digit) button followed by the programme number buttons.
- To set the line input video source, you can also use the PROG +/– buttons.
- To set the tape speed, you can also use the SP/LP button*2.
- When you are recording a programme in the SP mode and the remaining tape becomes shorter than the recording time, the tape speed is automatically changed to the LP mode. Note that some interference will appear on the picture at the point the tape speed is changed. If you want to keep the same tape speed, set AUTO LONG PLAY*2 to OFF in the OPTIONS-1 menu (page 58).
- To check, change, or cancel the programme setting, press ←/→ to choose LIST, then press OK in step 4. For details, see step 3 in "Checking/changing/cancelling timer settings" (page 51).

Notes

- If the VPS/PDC signal is too weak or the broadcasting station failed to transmit VPS/PDC signals, the VCR will start recording at the set time without using the VPS/PDC function*1.
- The ⏲ indicator flashes in the display window when you press I/⏻ with no tape inserted.
- When you set TIMER OPTIONS*1 to STANDARD in the OPTIONS-2 menu, the SHOWVIEW menu does not appear on the TV screen. Select SHOWVIEW or VARIABLE.
- The station name*1 may not appear if the VCR does not receive station name information signals.

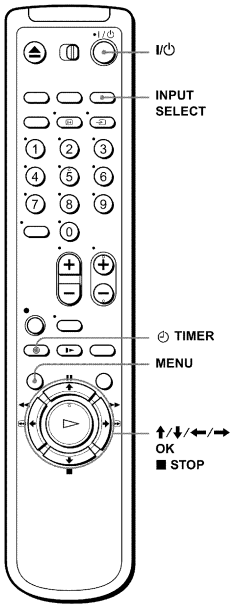
*1 SLV-SE450K only
*2 not available on SLV-SE100K/SX100K

Recording TV programmes using the timer

You can preset a total of eight programmes, including settings made with other timer methods.

Before you start...

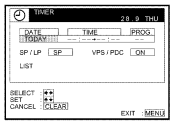
- Check that the VCR clock is set to the correct time and date.
- Insert a tape with its safety tab in place. Make sure the tape is longer than the total recording time.
- Turn on your TV and set it to the video channel.
- Set TIMER OPTIONS*1 to STANDARD or VARIABLE in the OPTIONS-2 menu (see page 59).



1 TIMER

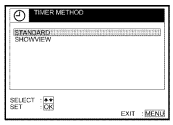
Press ⏲ TIMER.

For SLV-SE100K/SX100K and SE400K:
The TIMER menu appears on the TV screen.

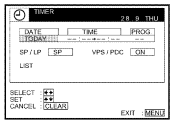


For SLV-SE450K:

- When you set TIMER OPTIONS to VARIABLE:
  The TIMER METHOD menu appears on the TV screen. Press ↑/↓ to select STANDARD, then press OK.



- When you set TIMER OPTIONS to STANDARD:
  The TIMER menu appears on the TV screen.



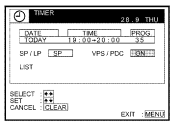
2

Set the date, start and stop times, programme position or station name*1, tape speed*2, and VPS/PDC function*1:

1 Press ➡ to highlight each item in turn.

2 Press ↑/↓ to set each item.

To correct a setting, press ⬅ to return to that setting and reset.



- To record the same programme every day or the same day every week, see "Daily/weekly recording" on page 46.
- To use the VPS/PDC function, set VPS/PDC to ON. For details about the VPS/PDC function, see "Timer recording with VPS/PDC signals" on page 42.

INPUT SELECT

- To record from a source connected to the LINE input, press INPUT SELECT to display the connected line in the "PROG." position.

continued

3 MENU

Press MENU to exit the menu.

4 I/⏻

Press I/⏻ to turn off the VCR.

The ⏲ indicator appears in the display window and the VCR stands by for recording.

To record from a source, leave the connected equipment switched on.

To stop recording

To stop the VCR while recording, press ■ STOP.

Daily/weekly recording

In step 2 above, press ↓ to select the recording pattern. Each time you press ↓, the indication changes as shown below. Press ↑ to change the indication in reverse order.
TODAY → SUN-SAT (Sunday to Saturday) → MON-SAT (Monday to Saturday) → MON-FRI (Monday to Friday) → SAT (every Saturday) ..... → MON (every Monday) → SUN (every Sunday) → 1 month later → (dates count down) → TOMORROW → TODAY

To use the VCR after setting the timer

To use the VCR before a recording begins, just press I/⏻. The ⏲ indicator turns off and the VCR switches on. Remember to press I/⏻ to reset the VCR to recording standby after using the VCR.

You can also do the following tasks while the VCR is recording:

- Reset the counter (page 34).
- Display tape information on the TV screen (page 37).
- Check the timer settings (page 51).
- Watch another TV programme (page 38).

Tips

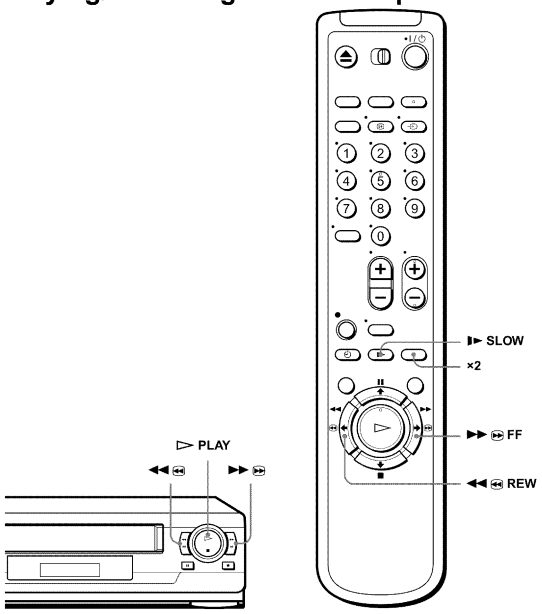
- To set the programme position, you can also use the PROG +/– or programme number buttons.
- To set the programme position with a two digit number, press –/– – (ten's digit) button followed by the programme number buttons.
- To set the line input video source, you can also use the PROG +/– buttons.
- To set the tape speed, you can also use the SP/LP button*2.
- When you are recording a programme in the SP mode and the remaining tape becomes shorter than the recording time, the tape speed is automatically changed to the LP mode. Note that some interference will appear on the picture at the point the tape speed is changed. If you want to keep the same tape speed, set AUTO LONG PLAY*2 to OFF in the OPTIONS-1 menu (page 58).
- Even if you set TIMER OPTIONS*1 to SHOWVIEW in the OPTIONS-2 menu, you can set the timer manually. Press MENU to select TIMER, then go to step 2.
- To check, change, or cancel the programme setting, press ⬅/➡ to choose LIST, then press OK in step 2. For details, see step 3 in "Checking/changing/cancelling timer settings" (page 51).

Notes

- When setting the timer with VPS/PDC signals, enter the start and stop times exactly as indicated in the TV programme guide. Otherwise, the VPS/PDC function*1 won't work.
- If the VPS/PDC signal is too weak or the broadcasting station failed to transmit VPS/PDC signals, the VCR will start recording at the set time without using the VPS/PDC function*1.
- The ⏲ indicator flashes in the display window when you press I/⏻ with no tape inserted.
- The station name*1 may not appear if the VCR does not receive station name information signals.

*1 SLV-SE450K only
*2 not available on SLV-SE100K/SX100K

Playing/searching at various speeds



Playback options	Operation
View the picture during fast-forward or rewind	During fast-forward, hold down ▶▶ FF/▶▶. During rewind, hold down ◀◀ REW/◀◀.
Play at high speed	• During playback, press ▶▶ FF or ◀◀ REW on the remote commander. • During playback, hold down ▶▶ FF/▶▶ or ◀◀ REW/◀◀. When you release the button, normal playback resumes.

Playback options	Operation
Play at twice the normal speed*1	During playback, press ×2.
Play in slow motion	During playback, press ▮► SLOW.
Play frame by frame	During pause, press ▶▶ FF or ◀◀ REW on the remote commander. Hold down ▶▶ FF or ◀◀ REW to play one frame each second.
Rewind and start play	During stop, press ▷ PLAY on the VCR while holding down ◀◀ on the VCR.

To resume normal playback

Press ▷ PLAY.

Tip

- Adjust the picture using the TRACKING +/– buttons if:
  – Streaks appear while playing in slow motion.
  – Bands appear at the top or bottom while pausing.
  – The picture shakes while pausing.
  To set tracking to the centre position, press both buttons (+/–) at the same time.

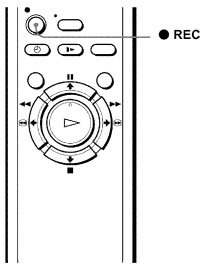
Notes

- The sound is muted during these operations.
- In the LP mode*1, noise may appear or there may be no colour.
- If the playback mode mark doesn't appear on the TV screen, press 1+ DISPLAY.
- The picture may show noise when playing at high speed in reverse.*2

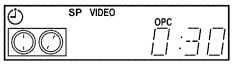
*1 not available on SLV-SE100K/SX100K
*2 SLV-SE100K/SX100K only

Setting the recording duration time

After you have started recording in the normal way, you can have the VCR stop recording automatically after a specified duration.



1 While recording, press ● REC.
The ◴ indicator appears in the display window.



2 Press ● REC repeatedly to set the duration time.
Each press advances the time in increments of 30 minutes.

0:30 → 1:00 ----- 5:30 → 6:00 → Normal recording

The tape counter decreases minute by minute to 0:00, then the VCR stops recording and turns off automatically.

To extend the duration

Press ● REC repeatedly to set a new duration time.

To cancel the duration

Press ● REC repeatedly until the ◴ indicator disappears and the VCR returns to the normal recording mode.

To stop recording

To stop the VCR while recording, press ■ STOP.

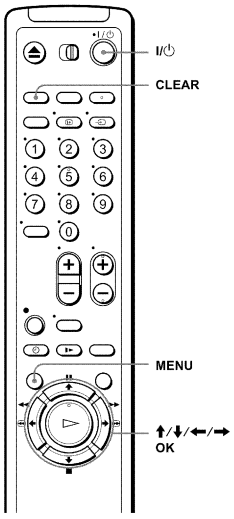
Note

- You cannot display the current tape time in the display window when setting the recording duration time.

Checking/changing/cancelling timer settings

Before you start...

- Turn on your TV and set it to the video channel.

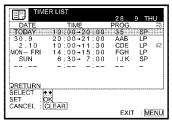


1 Press I/⏻ to turn on the VCR.

2 Press MENU, then press ↑/↓ to highlight LISTS and press OK.

3 Press ↑/↓ to highlight TIMER LIST, then press OK:

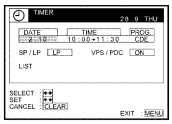
- If you want to change or cancel a setting, go on to the next step.
- If you do not need to change or cancel the settings, press MENU, then turn off the VCR to return to recording standby.



continued

4 Press ↑/↓ to select the setting you want to change or cancel, then press OK.

The selected setting appears in the TIMER menu.



5 • To change the setting, press ←/→ to highlight the item you want to change, then press ↑/↓ to reset it.

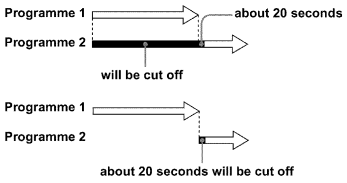
• To cancel the setting, press CLEAR.

6 Press MENU to exit the menu.

If any settings remain, turn off the VCR to return to recording standby.

When the timer settings overlap

The programme that starts first has priority and the second programme starts recording only after the first programme has finished. If the programmes start at the same time, the programme listed first in the menu has priority.



Tip

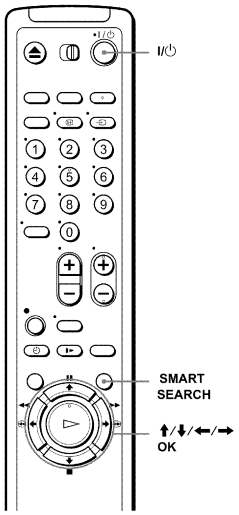
• In step 6 above, you can check the TIMER LIST by selecting LIST and pressing OK. Press MENU to exit the TIMER LIST.

Searching using the Smart Search function

If you record multiple programmes on a tape, use the Smart Search function to see what has been recorded on your tape. You can see information such as date, time, and programme position of programmes recorded on a tape. You can also start playback directly from the selected programme using the SMART SEARCH screen.

All programmes are listed on the screen, regardless of how the programme was recorded.

The data of the last tape inserted into the VCR is automatically stored in memory. If you want to recall the latest data screen, select LATEST DATA in the SMART SEARCH screen (see page 54).



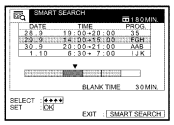
Before you start...

• Turn on your TV and set it to the video channel.

1 After recording, press I/⏻ to turn on the VCR.

2 Press SMART SEARCH.

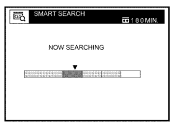
3 Press ↑/↓/←/→ to select the programme you want to start viewing.



continued

4 Press OK.

The VCR starts searching, and playback starts automatically from the beginning of the selected programme.



To stop searching

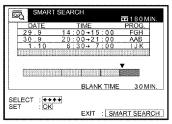
Press ■ STOP.

To exit the SMART SEARCH screen

Press SMART SEARCH.

To record in a blank space

Blank space on the tape will appear as a blank row in the SMART SEARCH screen. Select the last blank row in step 3, then press OK. The VCR rewinds/fast-forwards the tape to the beginning of the blank space, then stops. Start recording. Note that "BLANK TIME" and the remaining time indication only refers to the length of the last blank space.



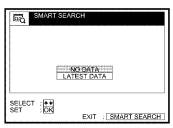
To recall the latest data screen after you remove the tape

You can display the data of the last tape used to record a programme, even after you have removed the tape.

If you reinsert the tape and record additional programmes, be sure to select LATEST DATA. Otherwise, all of the data for the tape is deleted.

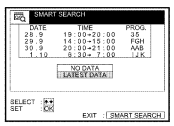
1 Reinsert the last tape that you used to record a programme.

2 Press SMART SEARCH.



3 Press ↑/↓ to highlight LATEST DATA.

If you want to reset the latest data screen, highlight NO DATA and press OK, then record a programme.



4 Press OK.

The latest data stored in the VCR's memory is displayed.

Tips

• You can store information for up to 24 programmes on a single list.

• While recording, you can display the SMART SEARCH screen using the SMART SEARCH button. If you decide to stop recording, press SMART SEARCH to make the SMART SEARCH screen disappear first. Then press ■ STOP.

Notes

• You cannot use this function unless the clock is set.

• Depending on the tape, the total or remaining time may not appear correctly.

• If many short programmes are recorded on a tape, multiple programmes may be included in a single block. In this case, only the latest programme information will appear in the SMART SEARCH screen.

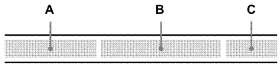
• Blank time is measured from the end of the last recorded programme to the end of the tape. However, if you eject the tape and then make a new recording on the same tape, the original recorded programme(s) is displayed as a blank space.

• If no information is stored in the VCR's memory, LATEST DATA does not appear in the SMART SEARCH screen.

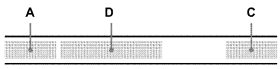
• The station name* may not appear if the VCR does not receive station name information signals.

• If you start recording a programme "D" from the middle of a previously recorded programme "A" and into another previously recorded programme "B," the Smart Search information for the second programme "B," which is recorded over, is deleted.

Originally recorded programmes



Recording the programme "D" over the programme "A" and "B"



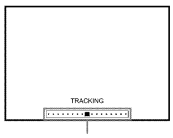
* SLV-SE450K only

Adjusting the picture

Adjusting the tracking

Although the VCR automatically adjusts the tracking when playing a tape (the ⊠ indicator flashes in the display window, then turns off), distortion may occur if the recording is in poor condition. In this case, manually adjust the tracking.

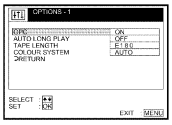
During playback, press TRACKING +/– to display the tracking meter. The distortion should disappear as you press one of the two buttons (the ⊠ indicator lights up). To resume automatic tracking adjustments, eject the tape and re-insert it.



Tracking meter

About the Optimum Picture Control (OPC) function

The Optimum Picture Control (OPC) function automatically improves recording and playback quality by adjusting the VCR to the condition of the video heads and tape. To maintain better picture quality, we recommend that you set OPC to ON in the OPTIONS-1 menu (the OPC indicator lights up in the display window). For details, see page 58.



OPC playback

The OPC function automatically works on all types of tapes, including rental tapes and tapes that were not recorded with OPC.

OPC recording

Whenever you insert a tape and start recording for the first time, the VCR adjusts to the tape using the OPC function (the OPC indicator flashes rapidly). This adjustment is retained until the tape is ejected.

To deactivate the OPC function

Set OPC to OFF in the OPTIONS-1 menu. The OPC indicator in the display window turns off.

Tip

- To set tracking to the centre position, press the TRACKING + and – buttons at the same time.

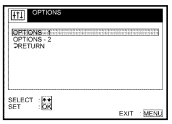
Notes

- You can adjust the tracking for an NTSC-recorded tape but the tracking meter won't be displayed.
- With the Auto Long Play function* on, the OPC function will work only in SP mode. If the tape speed automatically switches from SP to LP, the OPC function turns off. If, however, the entire programme is recorded in LP mode, the OPC function will work.
- There is a delay of about ten seconds before the VCR actually starts recording while the VCR analyses the tape. To avoid the delay, first set the VCR to recording pause (the OPC indicator flashes slowly) and press ● REC to have the VCR analyse the tape (the OPC indicator flashes rapidly) and return to recording pause. After the OPC indicator stops flashing, press ❚❚ PAUSE to start recording immediately.
  If you want to start recording quickly without using the OPC function, first set the VCR to recording pause (the OPC indicator flashes slowly) and press ❚❚ PAUSE again to start recording

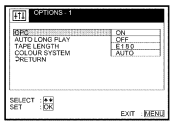
* not available on SLV-SE100K/SX100K

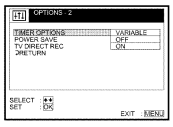
Changing menu options

1 Press MENU, then select OPTIONS and press OK.



2 Press ↑/↓ to highlight OPTIONS-1 or OPTIONS-2, then press OK.





3 Press ↑/↓ to select the option, then press OK.

4 Press ↑/↓ to change the setting, then press OK.

5 Press MENU to return to the original screen.

Menu choices

Initial settings are indicated in bold print.

OPTIONS-1

Menu option	Set this option to
OPC	• **ON** to switch on the OPC (Optimum Picture Control) function and improve picture quality. • OFF to switch off OPC.
AUTO LONG PLAY*1	• ON to change the timer recording tape speed automatically to the LP mode when the remaining tape length becomes shorter than the recording time. Note that for AUTO LONG PLAY to work correctly, the TAPE LENGTH setting must be accurate. • **OFF** to keep the set tape speed.
TAPE LENGTH	• **E180** to use an E-180 or shorter type tape. • E195 to use an E-195 type tape. • E240 to use an E-240 type tape. • E300 to use an E-300 type tape.
COLOUR SYSTEM	• **AUTO** to set the colour system automatically. • PAL to play back a tape recorded in the PAL colour system. • MESECAM to play back a tape recorded in the MESECAM colour system. If you press EJECT or turn the VCR off, COLOUR SYSTEM will be reset to AUTO.

OPTIONS-2

Menu option	Set this option to
TIMER OPTIONS*2	• **VARIABLE** to display the TIMER METHOD menu for selecting STANDARD or SHOWVIEW when pressing the ◴ TIMER button. • STANDARD to display the TIMER menu when pressing the ◴ TIMER button. • SHOWVIEW to display the SHOWVIEW menu when pressing the ◴ TIMER button. For details, see page 40 and 44.
POWER SAVE	• ON to turn off the indicators in the display window to conserve the VCR's power. • **OFF** to turn on the indicators in the display window while the VCR is standing by.
TV DIRECT REC*2	• **ON** to activate the TV Direct Rec function. • OFF to deactivate it.

Note

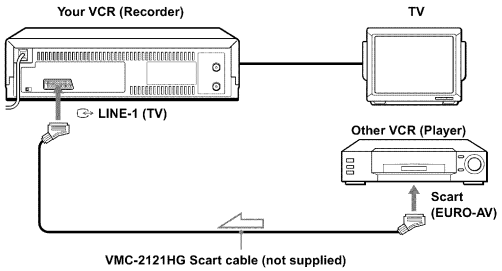
- When you set a timer recording, the indicators in the display window remain on, even though POWER SAVE is set to ON.

*1 not available on SLV-SE100K/SX100K
*2 SLV-SE450K only

Editing with another VCR

How to connect to record on this VCR

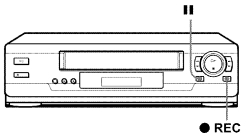
Connect the line outputs of the other VCR to the LINE IN connector or jacks of this VCR.



Operation (when recording on this VCR)

Before you start editing

- Turn on your TV and set it to the video channel.
- Press INPUT SELECT to display the connected line in the display window.
- Press SP/LP to select the tape speed, SP or LP.*



1 Insert a source tape with its safety tab removed into the other (playback) VCR. Search for the point to start playback and set it to playback pause.

2 Insert a tape with its safety tab in place into this (recording) VCR. Search for the point to start recording and press ❚❚ (pause).

3 Press ● REC on this VCR to set it to recording pause.

4 To start editing, press the ❚❚ (pause) buttons on both VCRs at the same time.

To stop editing

Press the ■ STOP buttons on both VCRs.

Tip

- To cut out unwanted scenes while editing, press ❚❚ (pause) on this VCR when an unwanted scene begins. When it ends, press ❚❚ (pause) again to resume recording.

Note

- If you start editing following the procedure above, the VCR won't start recording with the OPC function. To record a tape with the OPC function, press ● REC again during recording pause in step 3 so the VCR analyses the tape. Then, press ❚❚ (pause) after the OPC indicator stops flashing to start recording. If you press ❚❚ (pause) before the OPC indicator stops flashing, the OPC function is cancelled.

* not available on SLV-SE100K/SX100K

Additional Information

Troubleshooting

If you have any questions or problems not covered below, please consult your nearest Sony service facility.

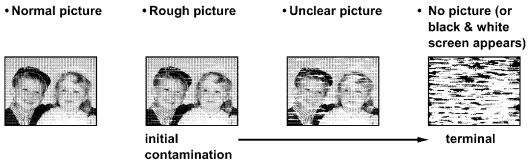
	Symptom	Remedy
Power	The I/⏻ ON/STANDBY switch does not function.	• Connect the mains lead to the mains securely.
	The power is turned on but the VCR does not operate.	• Moisture condensation has occurred. Turn the power off, unplug the mains lead and leave the VCR to dry for over three hours.
	The VCR is plugged in but the display window remains dark.	• Set POWER SAVE to OFF (see page 59).
Clock	The clock has stopped and "–:– –" appears in the display window.	• The clock stops if the VCR is disconnected from the mains for more than one hour. Reset the clock (and timer).
Playback	The playback picture does not appear on the TV screen.	• Make sure the TV is set to the video channel. If you are using a monitor, set it to video input. • If the VCR is connected to the TV with the Scart cable, make sure the VIDEO indicator is lit in the display window. Use the TV/VIDEO button on the remote commander to light up the VIDEO indicator.
	The picture is not clear.	• If your TV is connected to the VCR with both Scart and aerial cables, make sure the RF channel is set to OFF (see page 13). • Existing broadcasts may interfere with the VCR. Reset the RF channel output of your VCR. • Adjust the tracking with the TRACKING +/– buttons. • The video heads are dirty (see the last page of Troubleshooting). Clean the video heads using the Sony T-25CLD, E-25CLDR, or T-25CLW video head cleaning cassette. If these cleaning cassettes are not available in your area, have the heads cleaned at your nearest Sony service facility (a standard service charge will be required). Do not use a commercially available liquid type cleaning cassette other than Sony's, as it may damage the video heads. • The video heads may have to be replaced. Consult your local Sony service facility for more information.
	The picture has no colour.	• The COLOUR SYSTEM option in the OPTIONS-1 menu is set to the wrong position. Set the option to conform to the system that the tape was recorded in.
	The picture rolls vertically during picture search.	• Adjust the vertical hold control on the TV or monitor.
	The picture has no sound.	• The tape is defective. • If you made A/V connections, check the audio cable connection.

	Symptom	Remedy
Recording	No TV programme appears on the TV screen.	• Make sure the TV is set to the video channel. If you are using a monitor, set it to video input. • If your TV is connected to the VCR with both Scart and aerial cables, make sure the RF channel is set to OFF (see page 13). • Existing broadcasts may interfere with the VCR. Reset the RF channel output of your VCR. • Select the correct source with the INPUT SELECT button. Select a programme position when recording TV programmes; select a line input when recording from other equipment.
	TV reception is poor.	• Make sure the aerial cable is connected securely. • Adjust the TV aerial. • Make sure the TV system is correctly set for your TV. • Make sure SYSTEM (B/G or D/K) in the TUNER menu is set to the same system in your local area.
	The tape starts playing as soon as it is inserted.	• The safety tab has been removed. To record on this tape, cover the tab hole (see page 38).
	The tape is ejected when you press ● REC.	• The safety tab has been removed. To record on this tape, cover the tab hole (see page 38).
	Nothing happens when you press ● REC.	• Make sure the tape is not at its end.
Timer recording	The timer does not operate.	• Check that the clock is set. • Make sure a tape has been inserted. • Check that the safety tab has not been removed. • Make sure the tape is not at its end. • Make sure a programme has been set for timer recording. • Make sure your timer settings are past the current time. • The clock stops if the VCR is disconnected from the mains for more than one hour. Reset the clock and timer. • Turn the power off and unplug the mains lead.
	The SHOWVIEW menu or the TIMER menu does not appear.	• Check that TIMER OPTIONS in the OPTIONS-2 menu is set correctly (see page 59).
	The VPS/PDC function does not operate properly.	• Check that the clock and the date are set correctly. • Check that the VPS/PDC time you set is the correct one (there might be a mistake in the TV programme guide). If the broadcast you wanted to record did not send the good VPS/PDC information, the VCR will not start recording. • If the reception is poor, the VPS/PDC signal might be altered and the VCR might not start recording.

continued

	Symptom	Remedy
Others	A tape cannot be inserted.	• Check that a tape isn't already in the tape compartment.
	The remote commander does not function.	• Make sure you are pointing the remote commander at the remote sensor on the VCR. • Replace all the batteries in the remote commander with new ones if they are weak. • Make sure the [TV] / [VIDEO] remote control switch is set correctly.
	The SMARTLINK function does not work.	• Check that your TV complies with SMARTLINK, MEGALOGIC, EASYLINK, Q-Link, EURO VIEW LINK, or T-V LINK. • Make sure you use the Scart cable to connect the VCR and your TV. • Make sure the Scart cable is connected securely.
	The tracking meter does not appear on the TV screen.	• The recording condition of the tape is very poor and tracking cannot be adjusted. • The tracking meter does not appear when playing back an NTSC-recorded tape.
	You cannot control other TVs.	• Set your TV's code number. The code number may change when you replace the batteries of the remote commander.
	The display window becomes dim.	• The display window automatically becomes dim when the VCR is in standby or timer recording mode.
	The VCR needs to be cleaned.	• Clean the cabinet, panel and controls with a dry, soft cloth, or a soft cloth slightly moistened with a mild detergent solution. Do not use any type of solvent, such as alcohol or benzine.

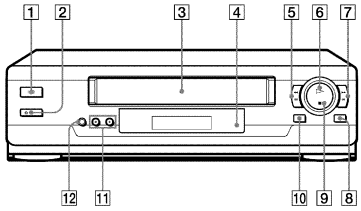
Symptoms caused by contaminated video heads



Index to parts and controls

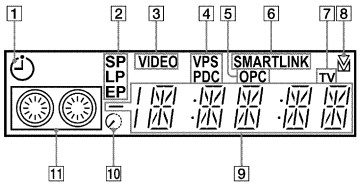
Refer to the pages indicated in parentheses ( ) for details.

Front panel



1 I/⏻ ON/STANDBY switch (11)
2 ⏏ EJECT button (34)
3 Tape compartment
4 Remote sensor (5)
5 ◀◀ (rewind) button (34) (48)
6 ▷ PLAY button (34) (49)
7 ▶▶ (fast-forward) button (34) (48)
8 ● REC (record) button (37) (50) (61)
9 ■ STOP button (34) (61)
10 ❚❚ (pause) button (34) (61)
11 PROGRAM/TRACKING +/– buttons (14) (49) (56)
12 AUTO SET UP/ RF (Radio Frequency) CHANNEL button (11) (14)

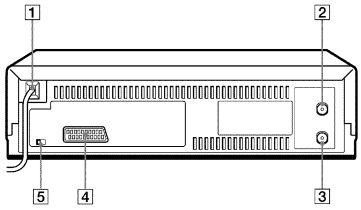
Display window



1 Timer indicator (42) (46)
2 Tape speed indicators*1 (37)
3 VIDEO indicator (9) (38)
4 VPS (Video Programme System)/PDC (Programme Delivery Control) indicator*2 (42)
5 OPC (Optimum Picture Control) indicator (56)
6 SMARTLINK indicator*2 (10)
7 TV indicator*2 (39)
8 Tracking indicator (56)
9 Time counter/clock/line/programme position indicator (34) (37) (61)
10 Remaining time indicator (37)
11 Tape/recording indicator (37)

*1 LP and EP are not available on SLV-SE100K/SX100K
*2 SLV-SE450K only

Rear panel

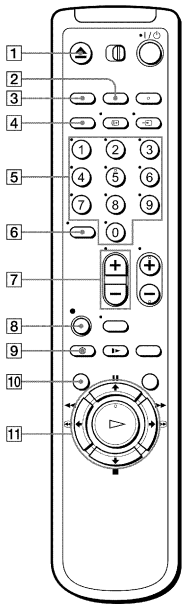


1 Mains lead (8) (9)
2 AERIAL IN ANTENNE ENTREE connector (8) (9)
3 AERIAL OUT ANTENNE SORTIE connector (8) (9)
4 LINE-1 (TV) LIGNE-1 (TV) connector (9)
5 NTSC PB (Play Back) switch (34)

Additional Information

continued

Remote commander



1 ⏏ EJECT button (34)

2 COUNTER/REMAIN button (37)

3 CLEAR button (34) (41) (52)

4 SP (Standard Play)/LP (Long Play) button* (37)

5 Programme number buttons (6) (38)

6 –/– – (ten's digit) button (6) (38)

7 (volume) +/– buttons (*for TV*) (6)

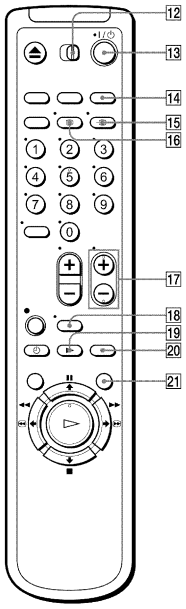
8 ● REC (record) button (37) (50)

9 TIMER button (41) (45)

10 MENU button (16) (51)

11 ❚❚ PAUSE/↑ button (16) (34)
■ STOP/↓ button (16) (34)
◀◀ REW(rewind)/← button (34) (48)
▶▶ FF (fast-forward)/→ button (34) (48)
▷ PLAY/OK button (16) (34)

* not available on SLV-SE100K/SX100K



12 TV / VIDEO remote control switch (5)

13 I/⏻ (on/standby) switch (6) (42)

14 INPUT SELECT button (38) (45) (61)

15 TV/VIDEO button (6) (9) (38)

16 DISPLAY button (37)

17 PROG (programme) +/– buttons (6) (24) (37)

18 WIDE button (*for TV*) (6)

19 ▮► SLOW button (49)

20 ×2 button* (49)

21 SMART SEARCH button (53)

* not available on SLV-SE100K/SX100K

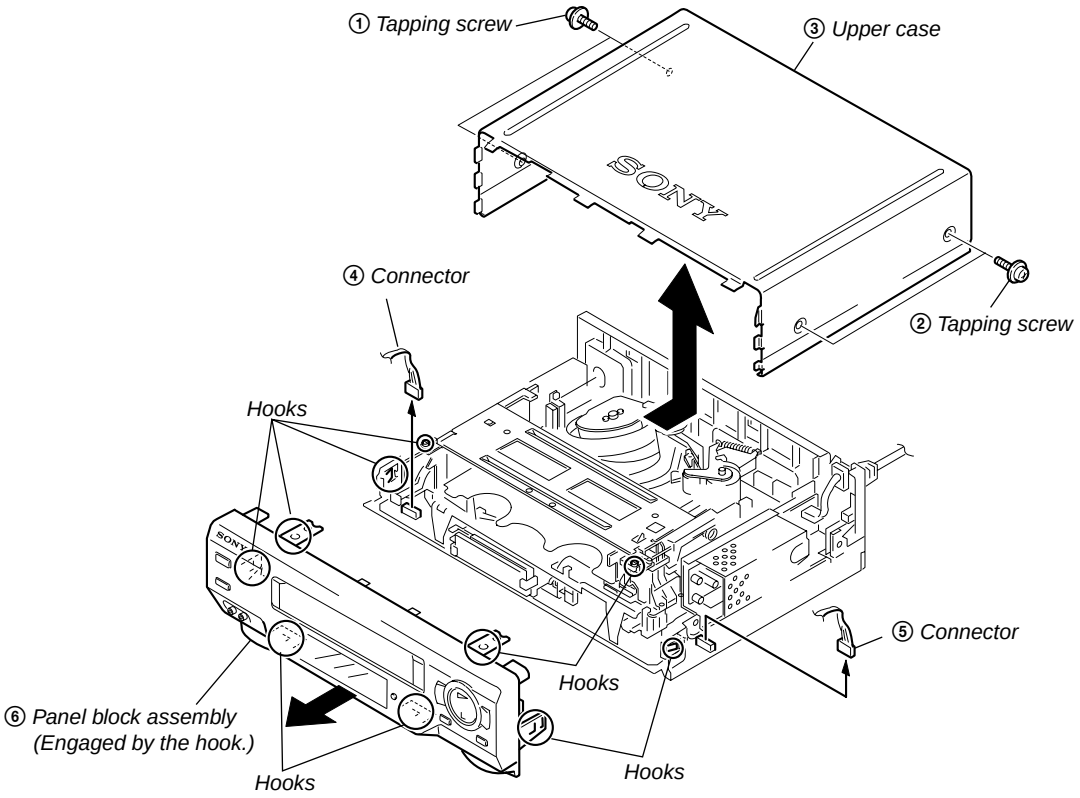
continued

MEMO

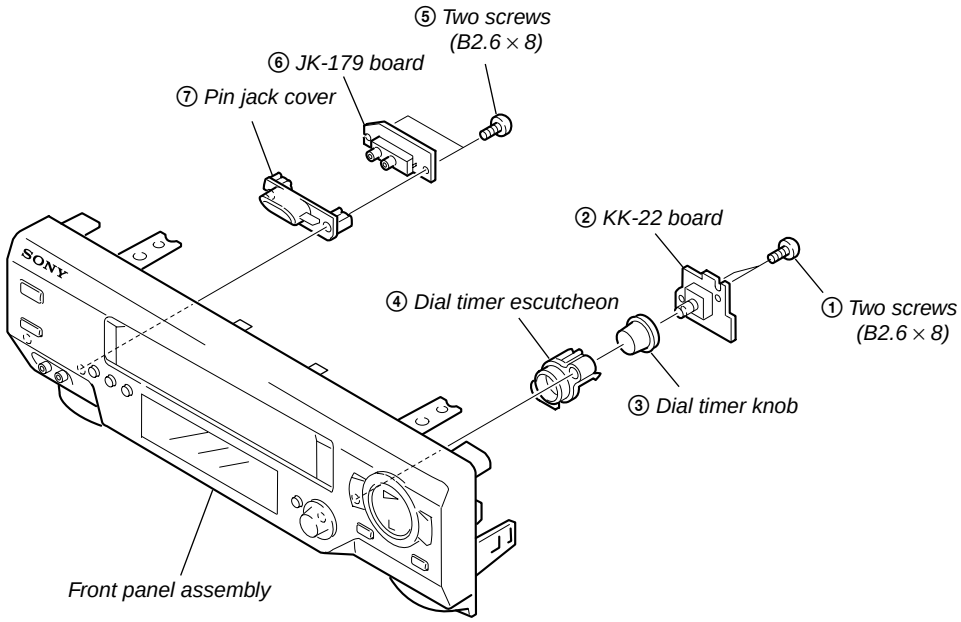
SECTION 2
DISASSEMBLY

NOTE: Follow the disassembly procedure in the numerical order given.

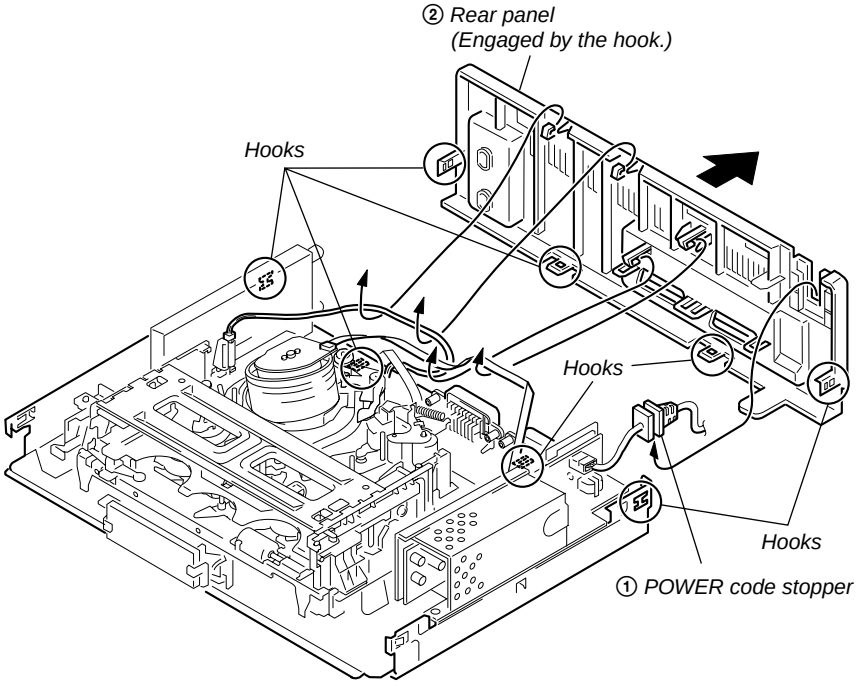
2-1. CASE, FRONT PANEL BLOCK ASSEMBLY



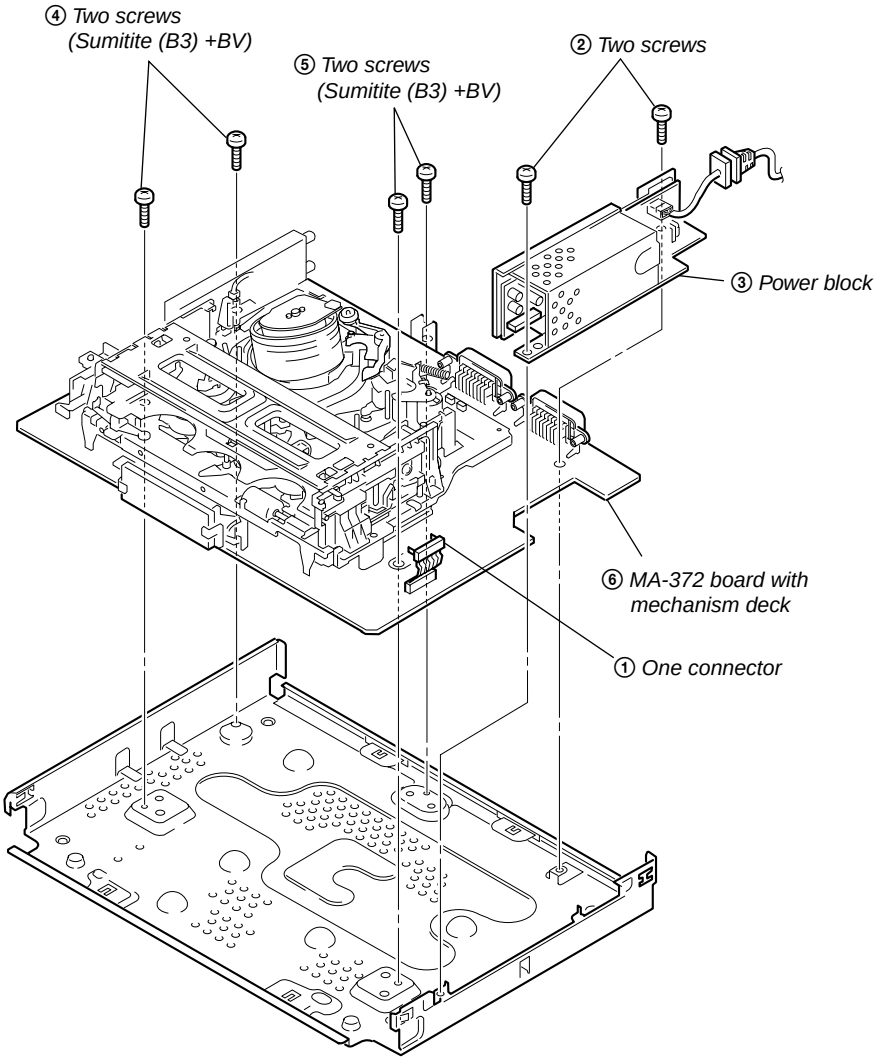
2-2. KK-22 BOARD (SE300, SE450B/D/P), JK-179 BOARD (SE300)



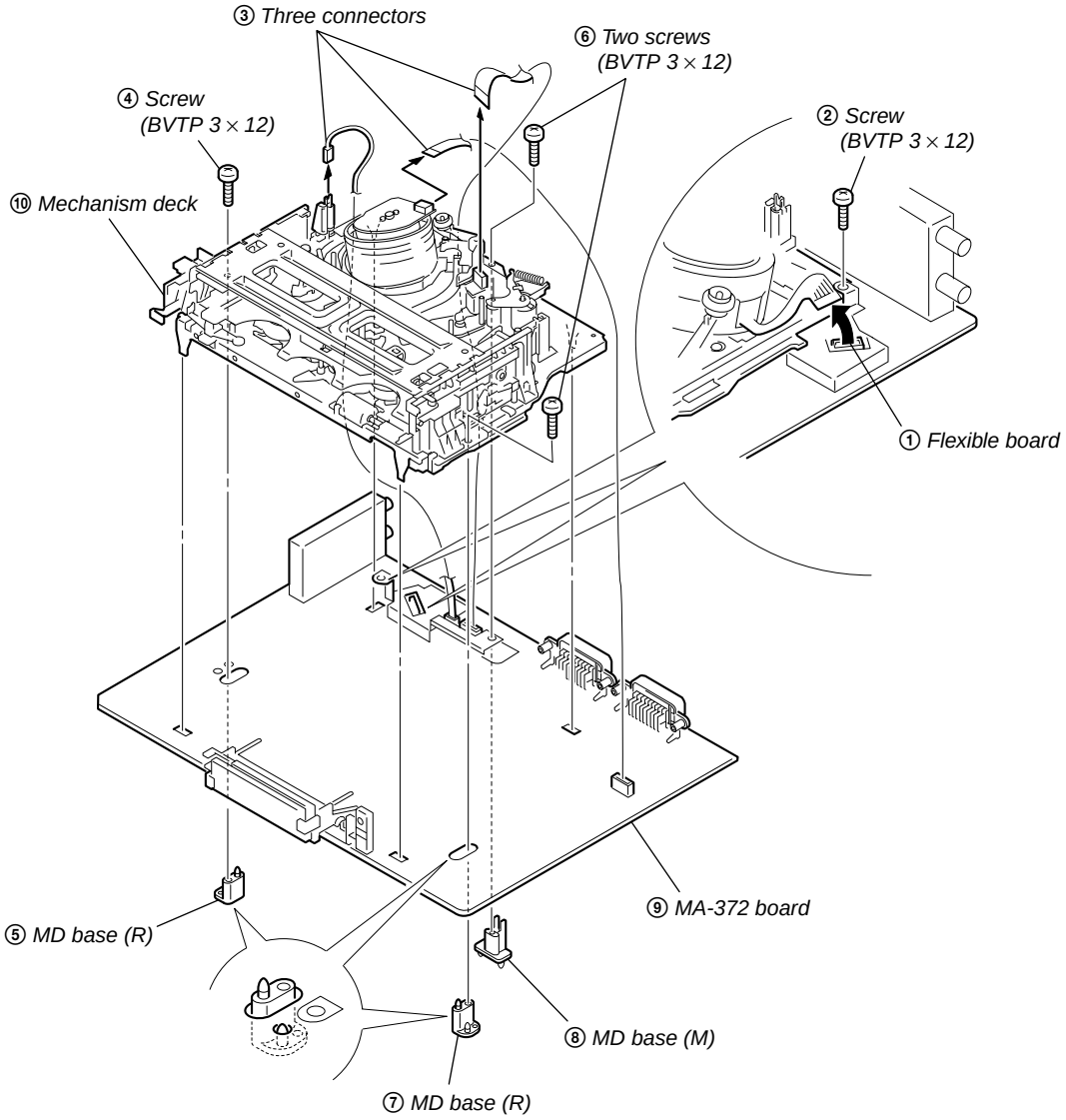
2-3. REAR PANEL



2-4. POWER BLOCK, MA-372 BOARD

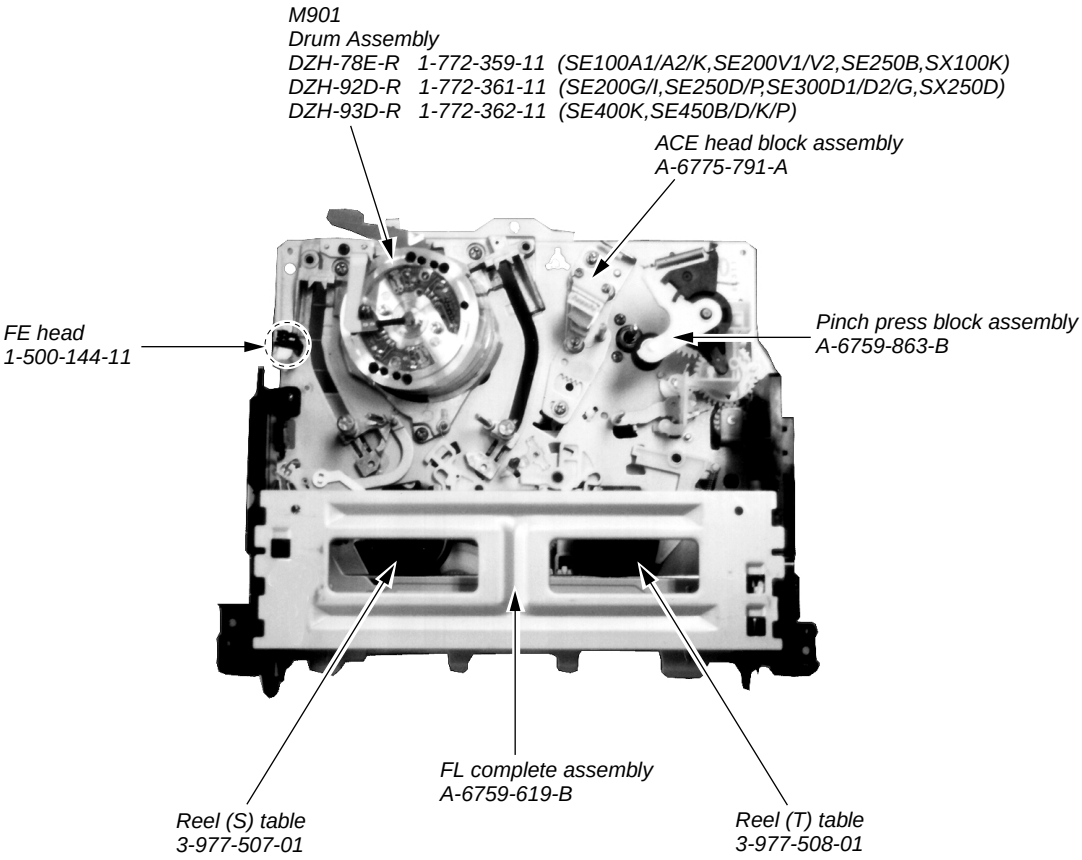


2-5. MECHANISM DECK

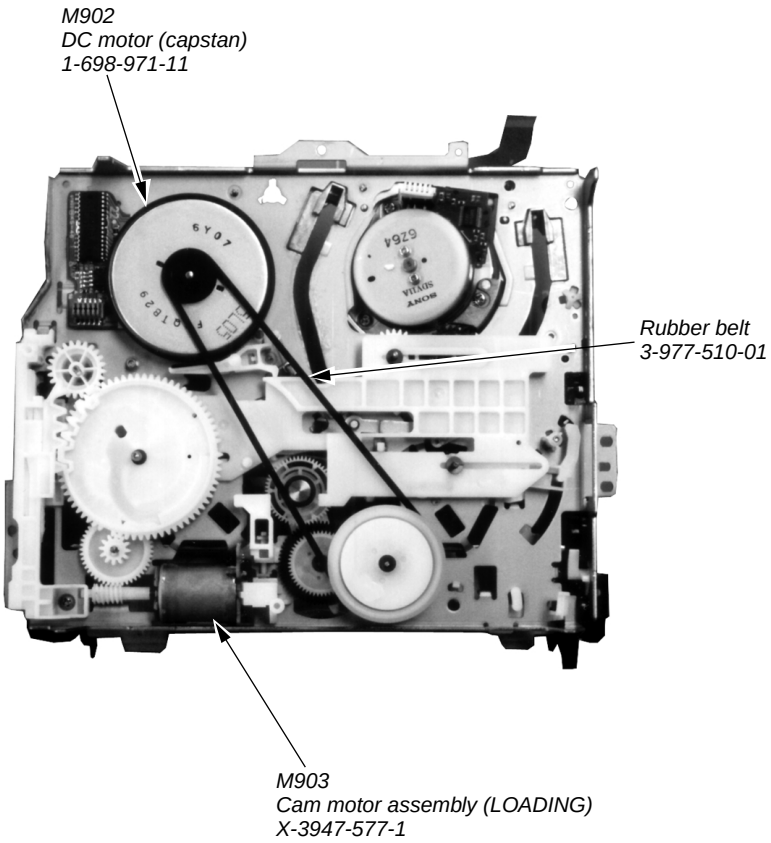


2-6. INTERNAL VIEWS

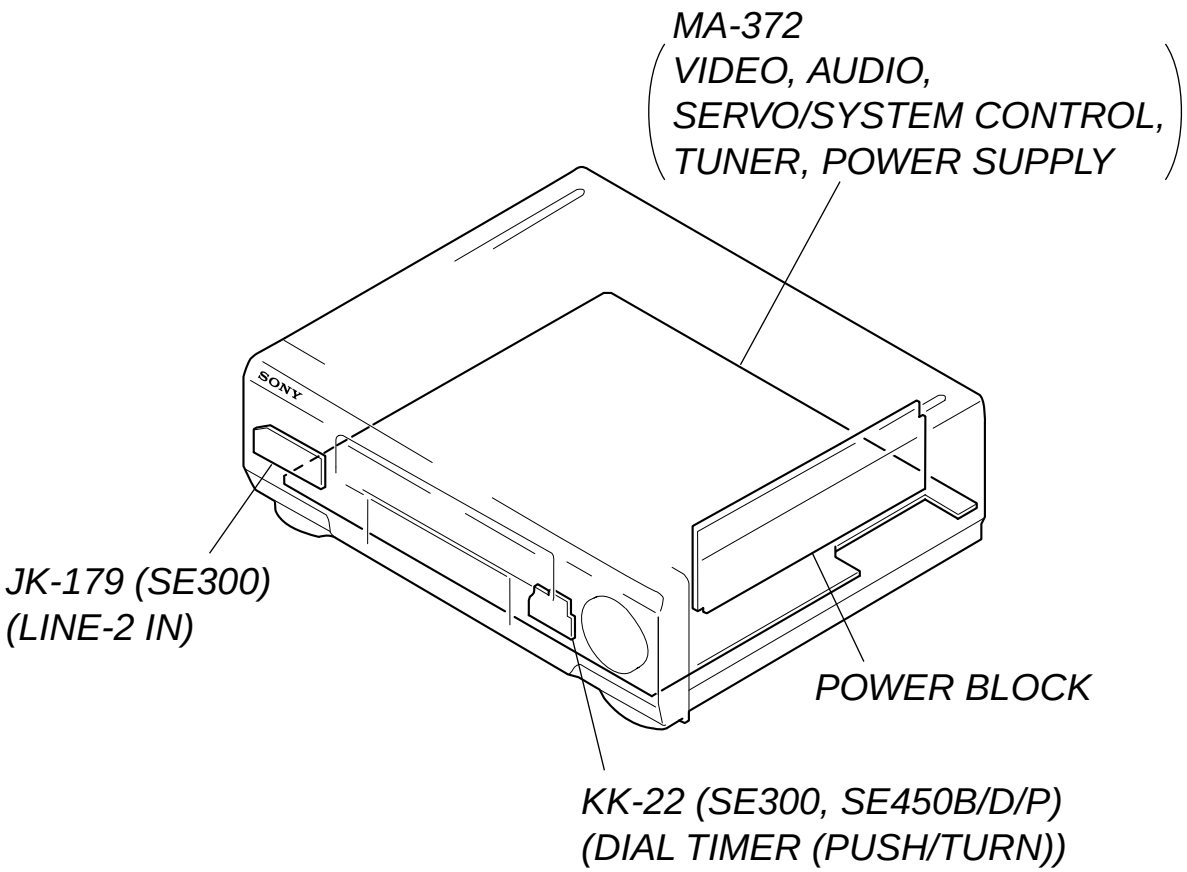
— Top View —



— Bottom View —



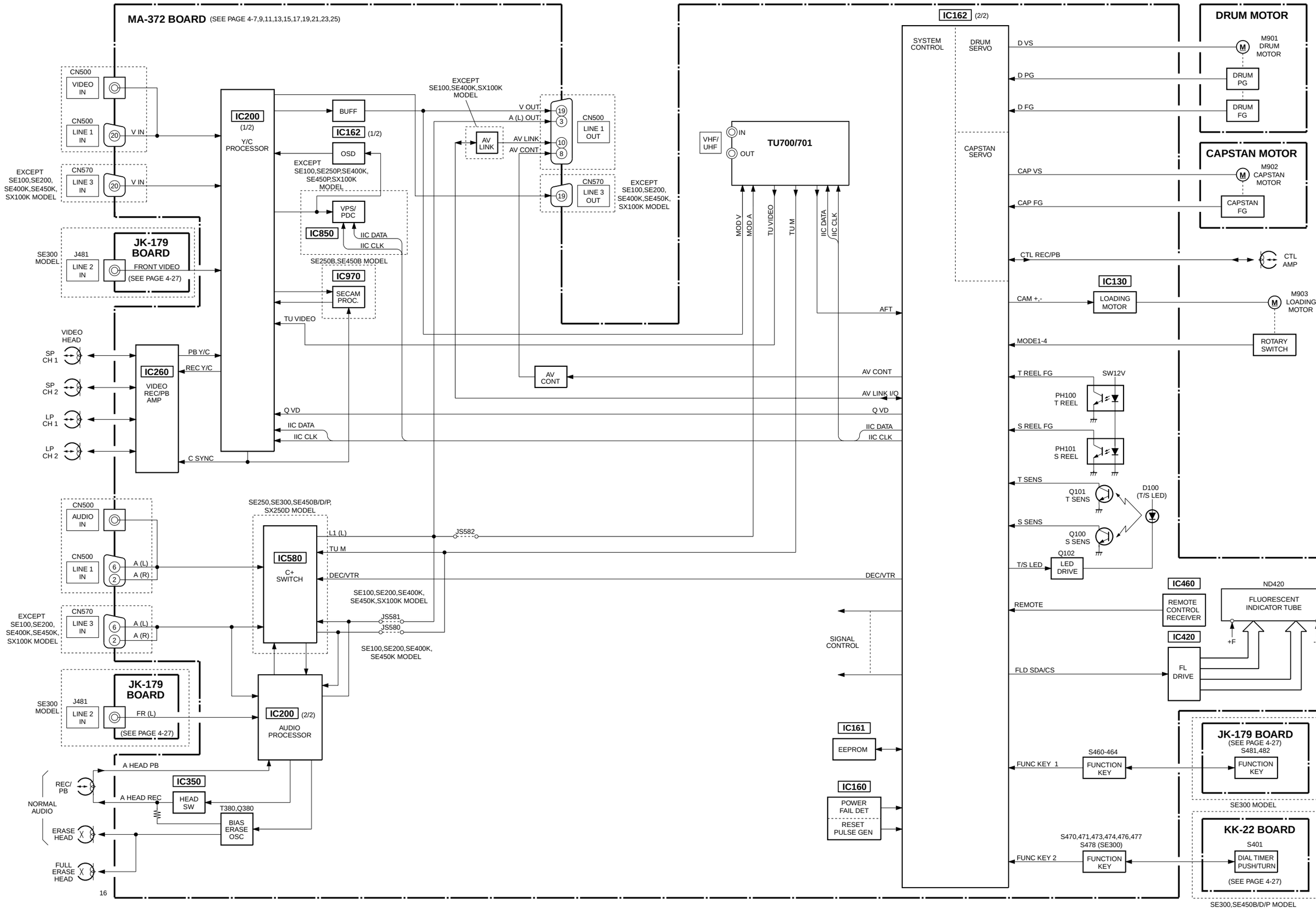
2-7. CIRCUIT BOARDS LOCATION



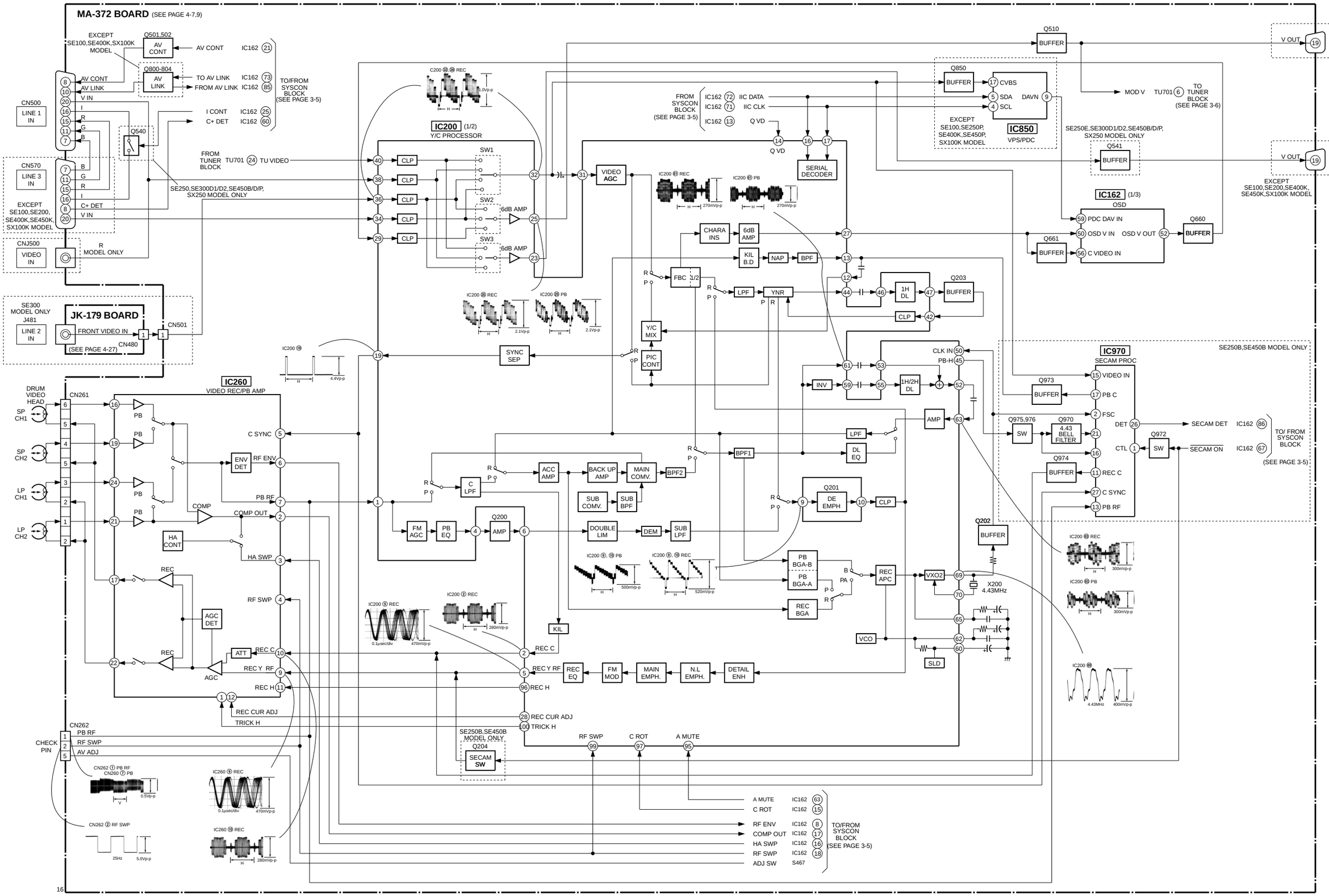
MEMO

SECTION 3
BLOCK DIAGRAMS

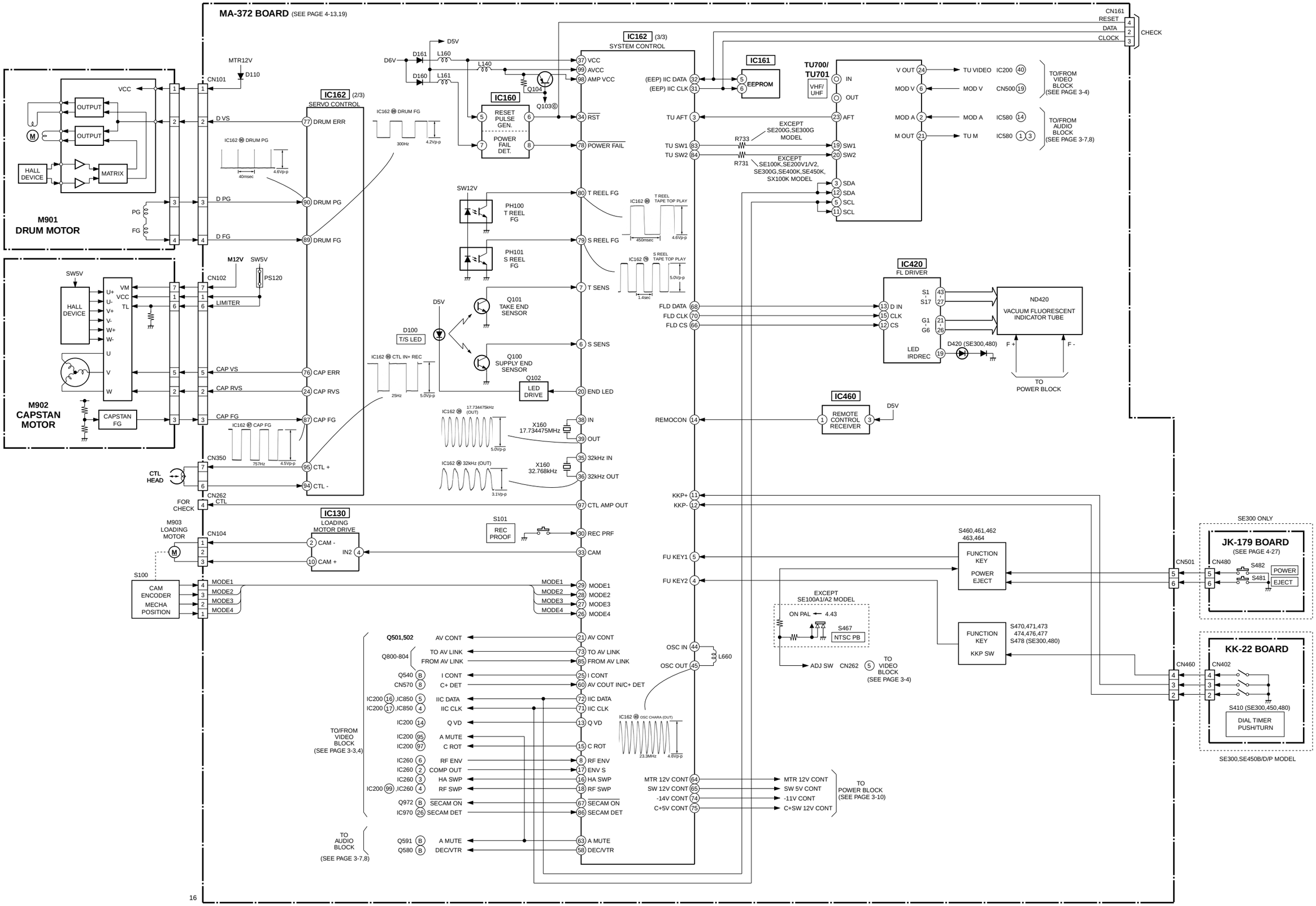
3-1. OVERALL BLOCK DIAGRAM



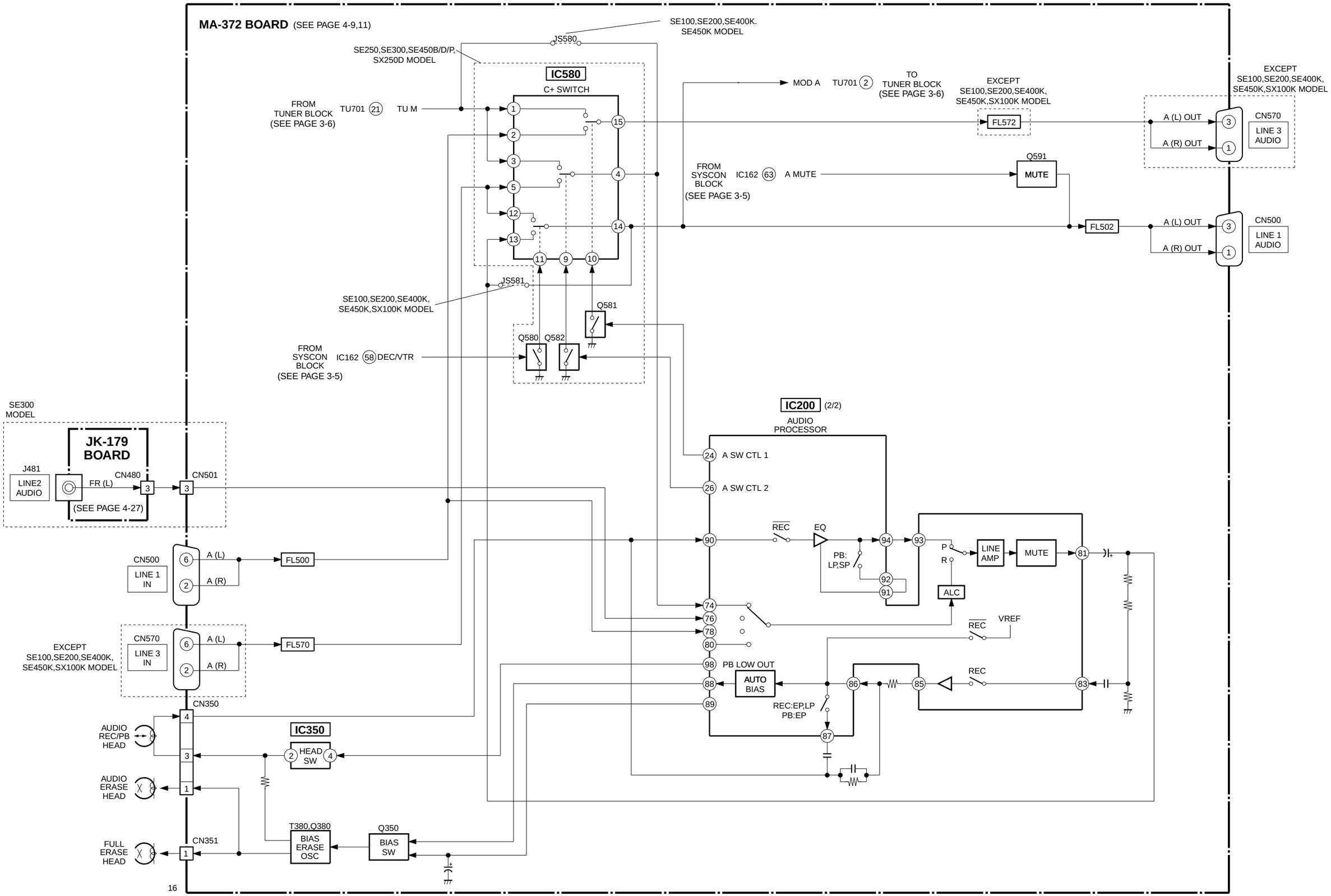
3-2. VIDEO BLOCK DIAGRAM



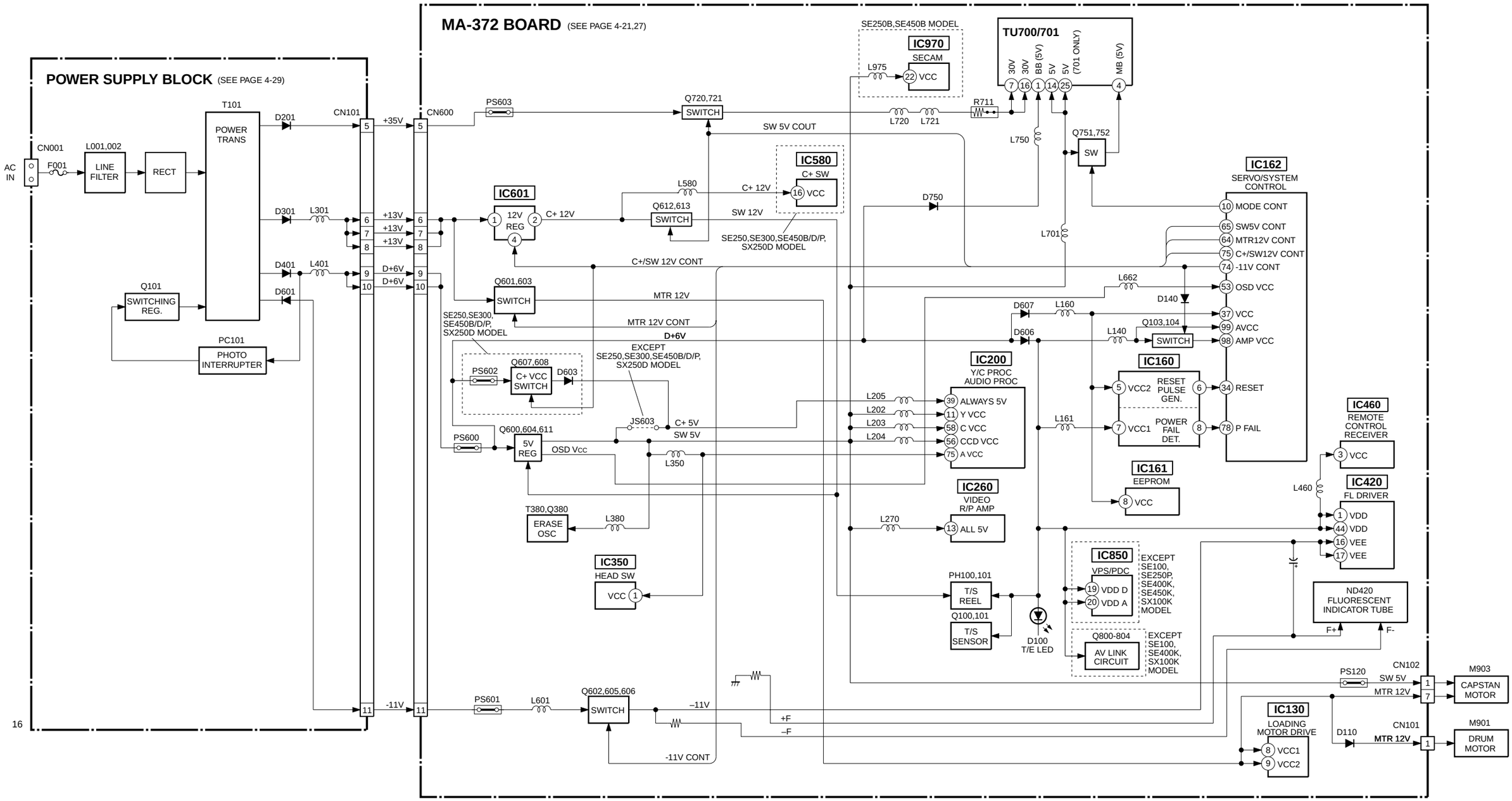
3-3. SERVO/SYSTEM CONTROL BLOCK DIAGRAM



3-4. AUDIO BLOCK DIAGRAM



3-5. POWER BLOCK DIAGRAM



MEMO

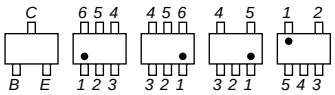
SECTION 4
PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.
(In addition to this, the necessary note is printed in each block.)

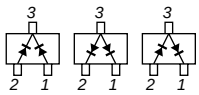
(For printed wiring boards)

- ▒▒: Pattern from the side which enables seeing.
  (The other layers' patterns are not indicated.)
- Through hole is omitted.
- Circled numbers refer to waveforms.
- There are few cases that the part printed on diagram isn't mounted in this model.
- Chip parts.

Transistor

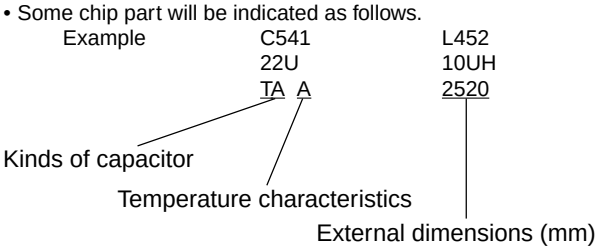


Diode



(For schematic diagrams)

- All capacitors are in µF unless otherwise noted. pF : µµF. 50V or less are not indicated except for electrolytics and tantalums.
- Chip resistors are 1/10W unless otherwise noted.
  kΩ=1000Ω, MΩ=1000kΩ.
- Caution when replacing chip parts.
  New parts must be attached after removal of chip.
  Be careful not to heat the minus side of tantalum capacitor, Because it is damaged by the heat.
- Some chip part will be indicated as follows.



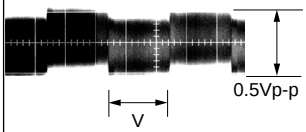
- Constants of resistors, capacitors, ICs and etc with XX indicate that they are not used.
  In such cases, the unused circuits may be indicated.
- Parts with ★ differ according to the model/destination.
  Refer to the mount table for each function.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- Signal name
  XEDIT → $\overline{\text{EDIT}}$ PB/XREC → PB/$\overline{\text{REC}}$
- : non flammable resistor
- : fusible resistor
- : panel designation
- △ : internal component.
- **B +** : B+ Line.
- **B −** : B– Line.
- Circled numbers refer to waveforms.
- Readings are taken with a color-bar signal input.
- Voltage are dc between ground and measurement points.
- Readings are taken with a digital multimeter (DC10MΩ).
- Voltage variations may be noted due to normal production tolerances.
- : adjustment for repair.
- Circled numbers refer to waveforms.

When indicating parts by reference number, please include the board name.

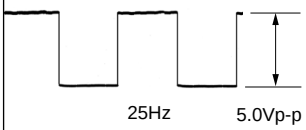
Note : The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

MA-372 BOARD
(REC/PB BLOCK)

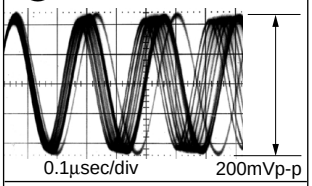
① CN262 ① PB RF
IC260 ⑦ PB



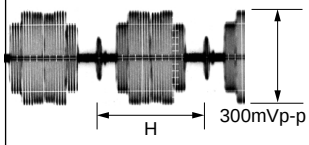
② CN262 ② RF SWP



③ IC260 ⑨ REC

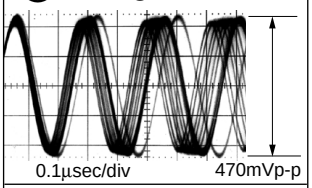


④ IC260 ⑩ REC

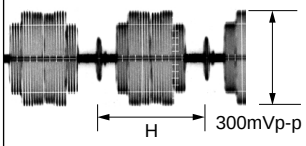


(VIDEO BLOCK)

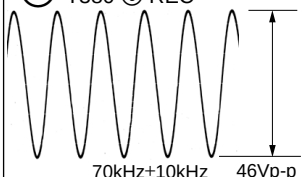
⑤ IC200 ⑤ REC



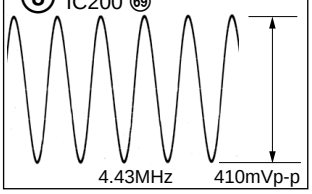
⑥ IC200 ② REC



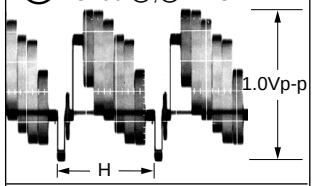
⑦ T380 ⑥ REC



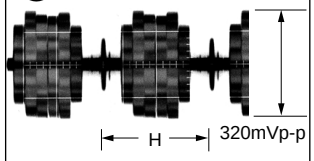
⑧ IC200 ⑥⑨



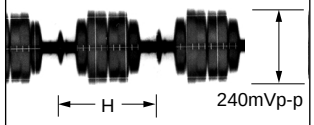
⑨ IC200 ㉜,㊱ REC



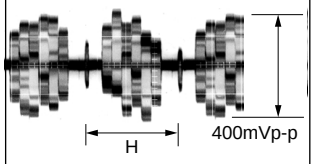
⑩ IC200 ⑥① REC



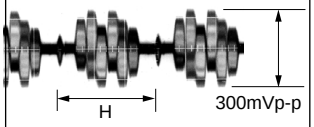
⑩ IC200 ⑥① PB



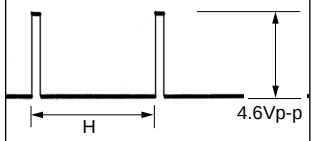
⑪ IC200 ⑥③ REC



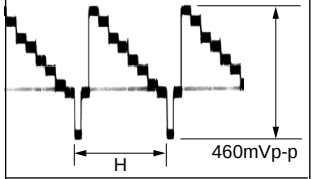
⑪ IC200 ⑥③ PB



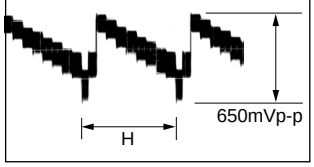
⑫ IC200 ⑲



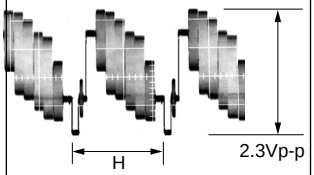
⑬ IC200 ⑨, ⑩ REC



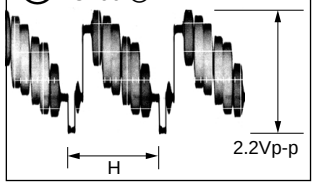
⑬ IC200 ⑨, ⑩ PB



⑭ IC200 ㉕ REC



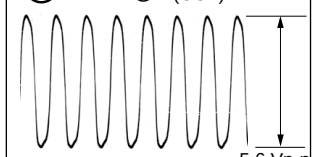
⑭ IC200 ㉕ PB



(SERVO/SYSTEM CONTROL BLOCK)

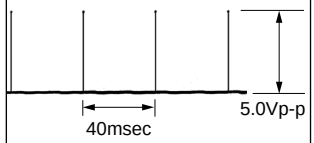
⑮ IC162 ㊱ 32kHz (OUT)

⑯ IC162 ㊴ 17.734475kHz (OUT)

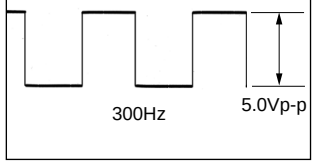


⑰ IC162 ㊺ OSC CHARA (OUT)

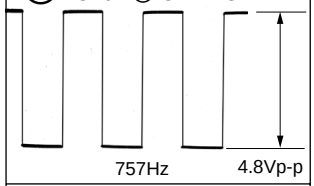
⑱ IC162 ㊿ DRUM PG



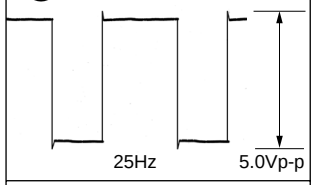
⑲ IC162 ㊾ DRUM FG



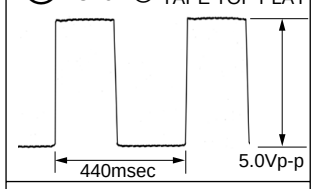
⑳ IC162 ㊼ CAP FG



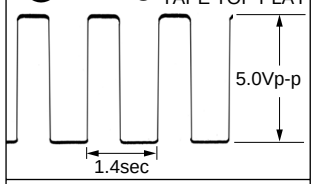
㉑ IC162 ㊺ CTL IN+ REC



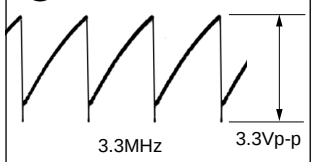
㉒ IC162 ㊵ T REEL TAPE TOP PLAY



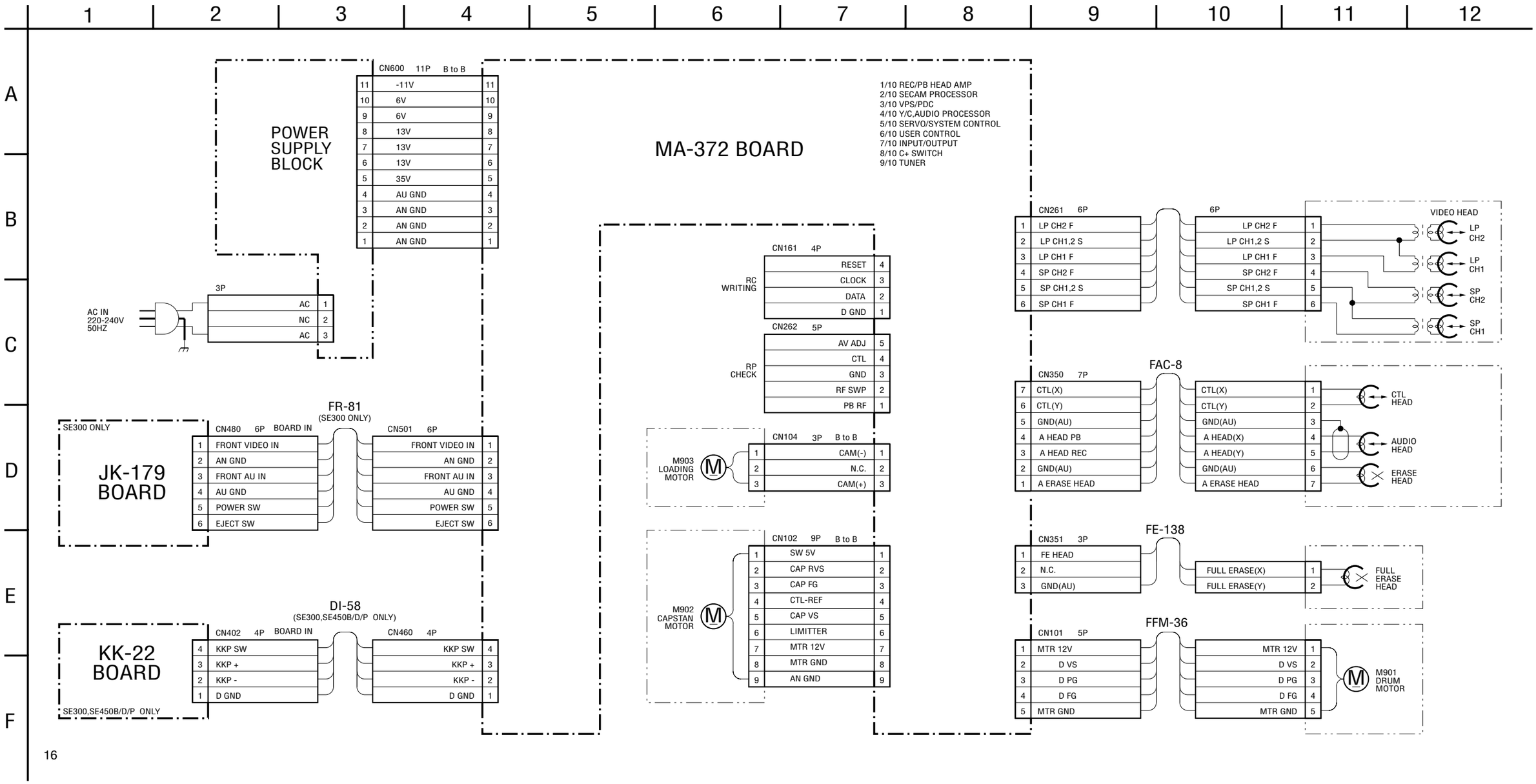
㉓ IC162 ㊴ S REEL TAPE TOP PLAY



㉔ IC420 ② X OUT



4-1. FRAME SCHEMATIC DIAGRAM



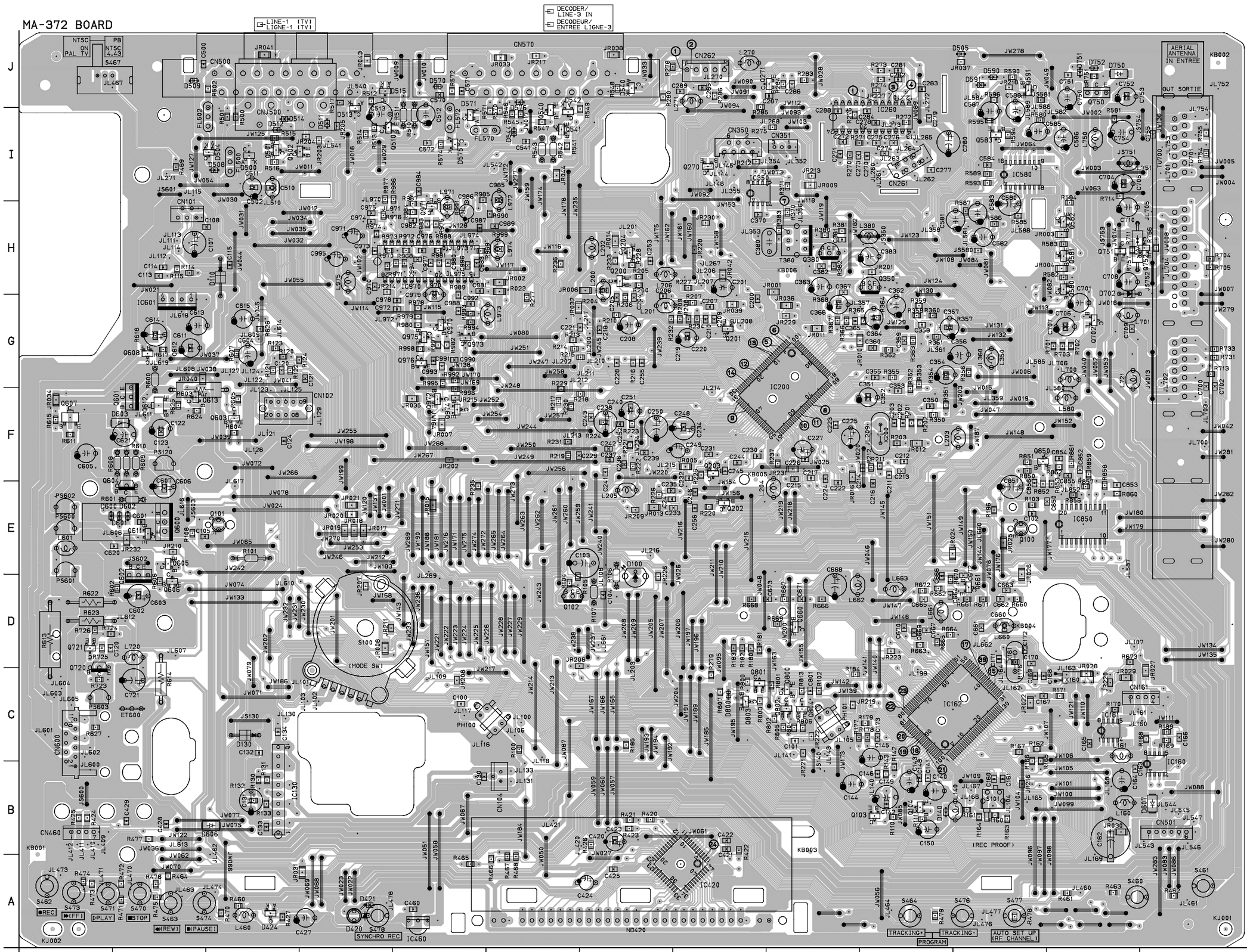
4-2. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

MA-372 (VIDEO, AUDIO, SERVO/SYSTEM CONTROL, TUNER, POWER SUPPLY) PRINTED WIRING BOARD

There are few cases that the part printed on this diagram isn't mounted in this model.

MA-372 BOARD

D100	D-7	Q270	I-8
D100	H-3	Q271	J-9
D140	B-10	Q350	H-10
D424	A-3	Q380	H-9
D500	I-3	Q501	I-3
D504	I-3	Q502	I-3
D509	J-2	Q510	I-4
D511	I-4	Q510	I-4
D513	I-4	Q540	I-6
D515	J-4	Q541	I-6
D540	J-7	Q580	G-12
D542	I-6	Q581	H-12
D544	I-6	Q582	H-12
D571	I-5	Q583	I-11
D575	I-5	Q600	E-2
D576	I-6	Q601	G-2
D600	E-2	Q603	F-3
D601	E-2	Q604	E-2
D602	E-2	Q605	E-2
D603	F-2	Q606	D-2
D606	B-3	Q607	F-1
D607	B-13	Q608	G-2
D750	J-12	Q611	E-2
D751	J-12	Q612	F-2
		Q613	F-2
IC130	B-3	Q660	D-9
IC160	B-13	Q661	D-11
IC161	C-12	Q702	G-12
IC162	C-10	Q720	C-1
IC200	F-9	Q721	D-1
IC260	I-10	Q750	J-12
IC260	I-10	Q751	H-12
IC420	A-8	Q752	H-12
IC460	A-5	Q800	C-9
IC580	I-11	Q801	C-8
IC601	G-2	Q802	C-9
IC970	H-5	Q803	C-8
		Q804	C-9
Q100	E-11	Q850	F-11
Q101	E-3	Q970	G-5
Q102	D-6	Q971	H-5
Q103	B-10	Q972	F-5
Q104	B-10	Q973	G-5
Q200	H-7	Q974	F-5
Q201	G-8	Q975	G-5
Q202	E-8	Q976	G-5
Q204	H-7		



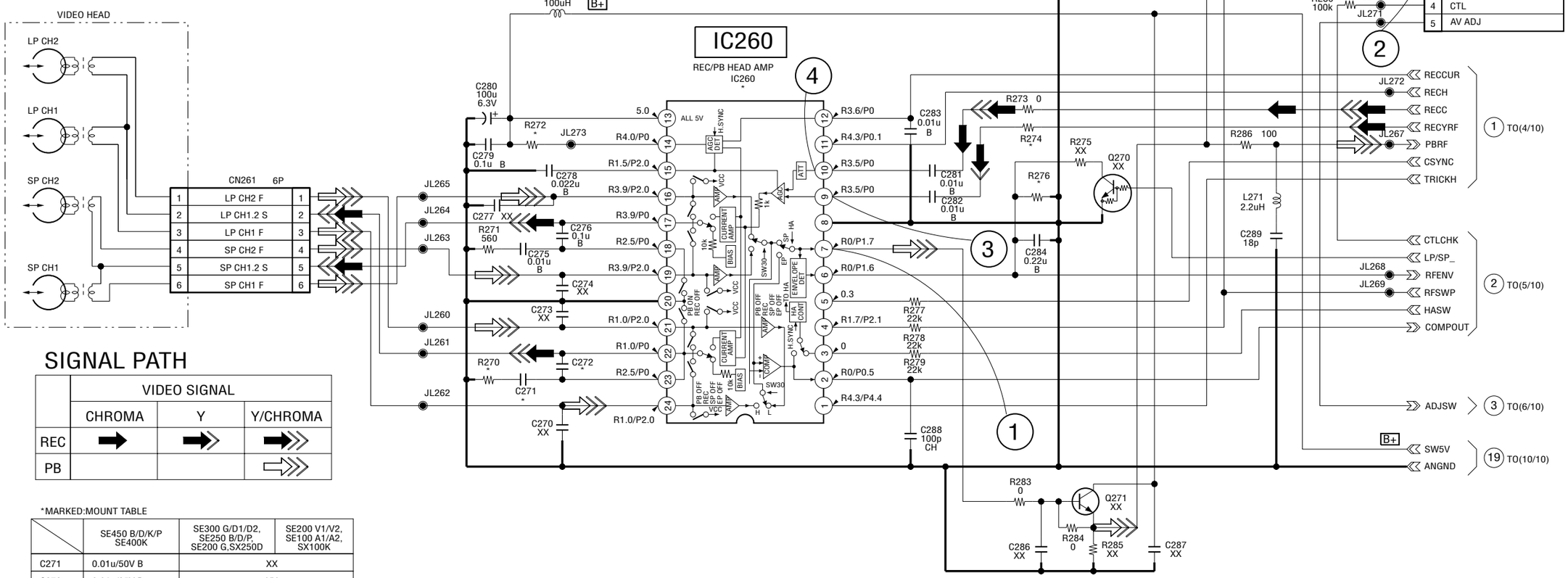
VIDEO, AUDIO, SERVO/SYSTEM CONTROL, TUNER, POWER SUPPLY
MA-372

For schematic diagram
• Refer to page 4-2 for waveforms.

MA-372 BOARD(1/10)
REC/PB HEAD AMP(RP BLOCK)

NO MARK:REC/PB MODE
R :REC MODE
P :PB MODE

XX MARK:NO MOUNT

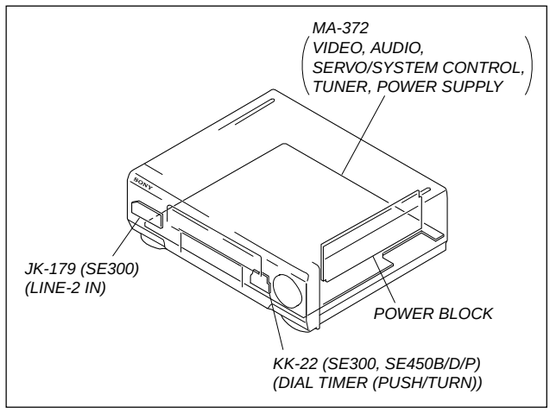


SIGNAL PATH

	VIDEO SIGNAL		
	CHROMA	Y	Y/CHROMA
REC	➡	➡	➡
PB			⇨

*MARKED:MOUNT TABLE

	SE450 B/D/K/P SE400K	SE300 G/D1/D2, SE250 B/D/P, SE200 G,SX250D	SE200 V1/V2, SE100 A1/A2, SX100K
C271	0.01u/50V B	XX	
C272	0.01u/25V B	XX	
IC260	LA70011	LA70001	
R270	560	XX	
R272	2700	1800	1200
R274	4700	5600	
R276	8200	15k	



For schematic diagram

• Refer to page 4-5 for printed wiring board.

MA-372 BOARD(2/10)

(SE450B,SE250B ONLY)

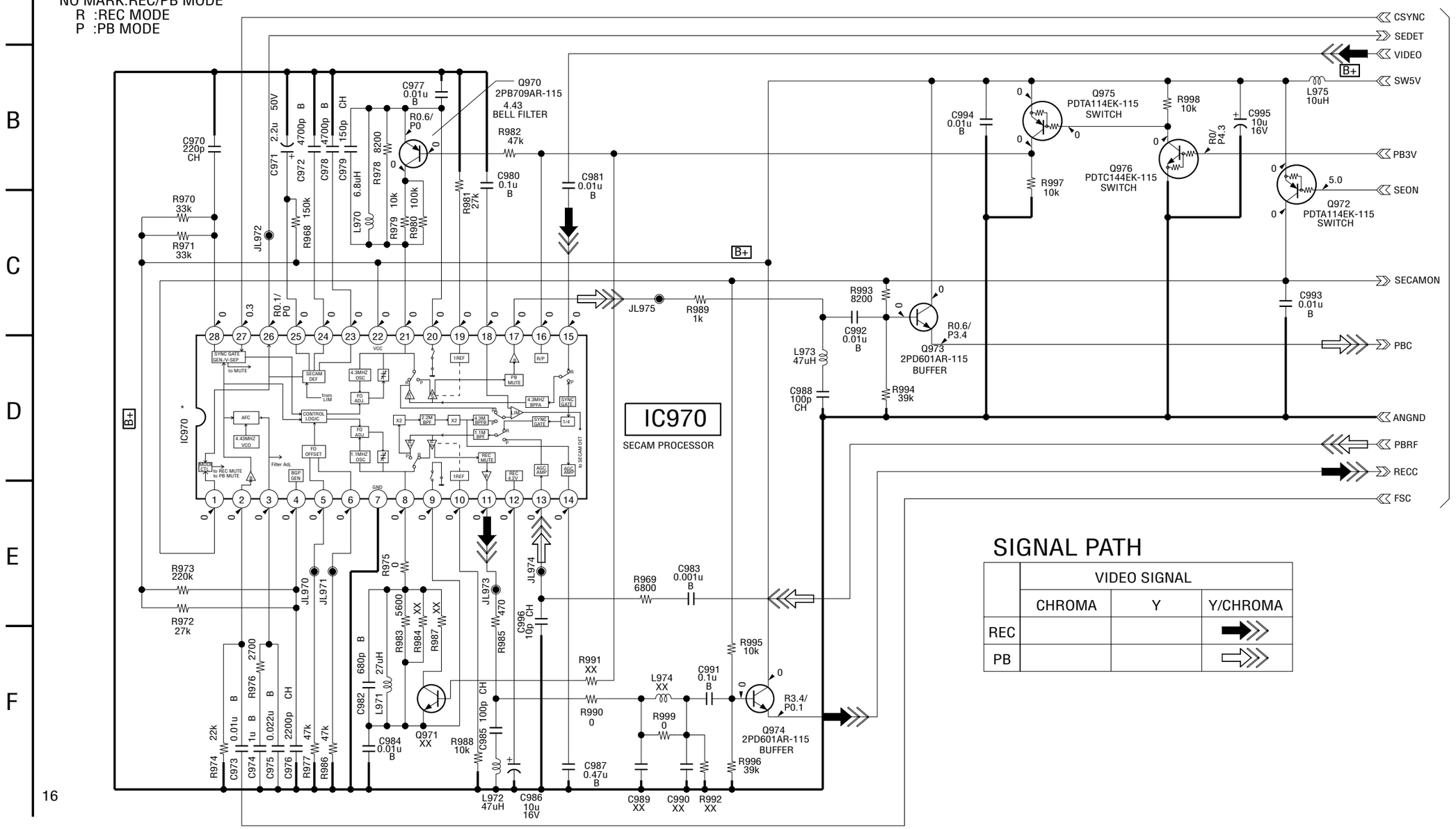
SECAM PROCESSOR(SE BLOCK)

XX MARK:NO MOUNT

NO MARK:REC/PB MODE

R :REC MODE

P :PB MODE

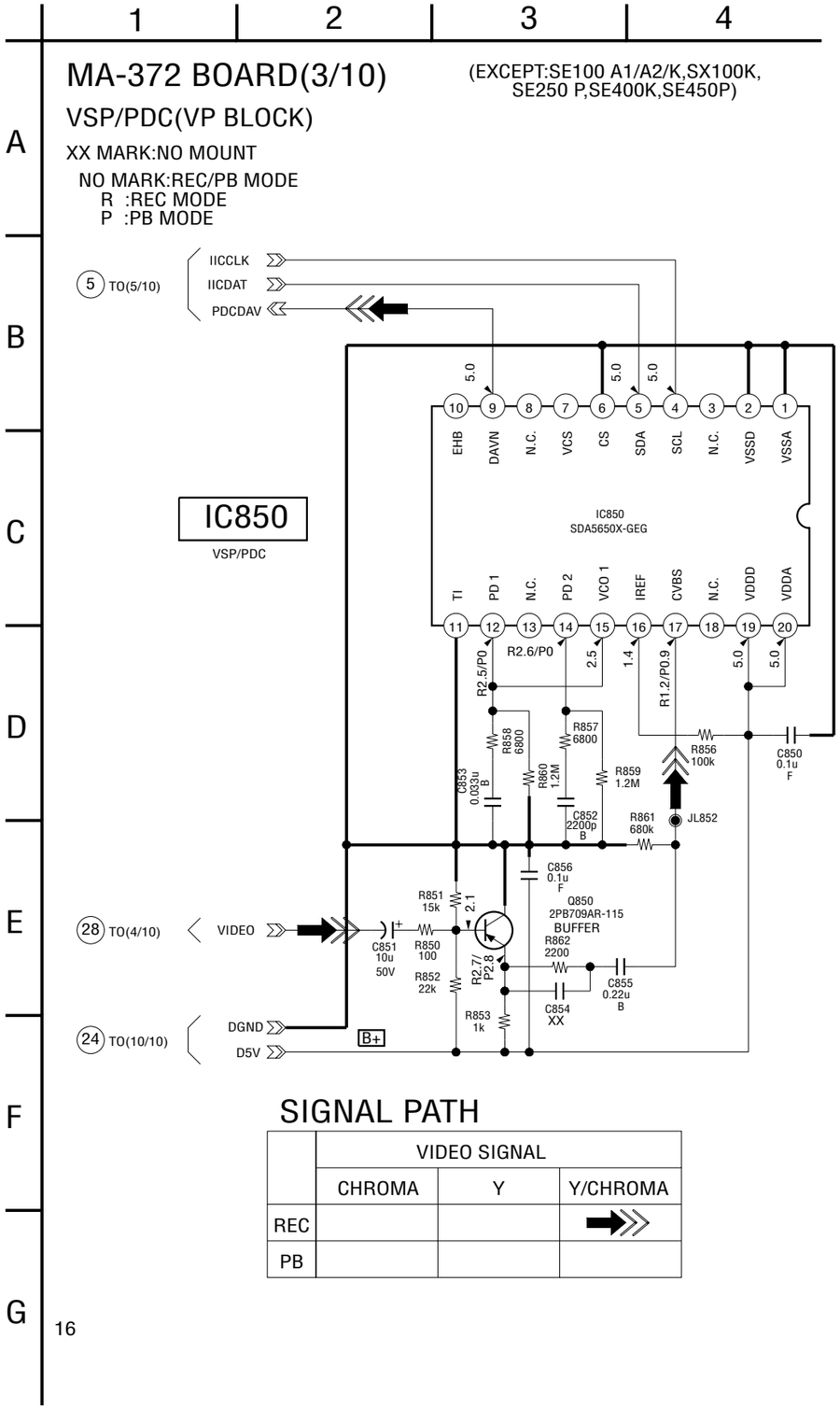


SIGNAL PATH

	VIDEO SIGNAL		
	CHROMA	Y	Y/CHROMA
REC			⇒
PB			⇨

For schematic diagram

• Refer to page 4-5 for printed wiring board.



SIGNAL PATH

	VIDEO SIGNAL		
	CHROMA	Y	Y/CHROMA
REC			➡
PB			

For schematic diagram

- Refer to page 4-5 for printed wiring board.
- Refer to page 4-2 for waveforms.
- Refer to page 4-31 for mounted table.

MA-372 BOARD(4/10)
Y/C,AUDIO PROCESSOR(VI BLOCK)
XX MARK:NO MOUNT
NO MARK:REC/PB MODE
R :REC MODE
P :PB MODE

SIGNAL PATH

	VIDEO SIGNAL			AUDIO SIGNAL
	CHROMA	Y	Y/CHROMA	
REC	➡	➡	➡	⇨
PB			⇨	⇨

SIGNAL PATH

	REC	REC/PB	PB
Ref.signal	▰		▱

IC200 Y/C PROCESSOR AUDIO PROCESSOR IC200 LA71562M-MPB

IC350 HEAD SELECTOR

Q200 2PD601AR-115 AMP

Q201 2PD601AR-115 DEEMPH

Q202 2PD601AR-115 BUFFER

Q203 2PB709AR-115 BUFFER

Q204 SECAM SW

Q350 2SC1815GR-TPE2 BIAS SW

Q380 2SD879-AA BIAS ERASE OSC

T380 BIAS OSCILLATION

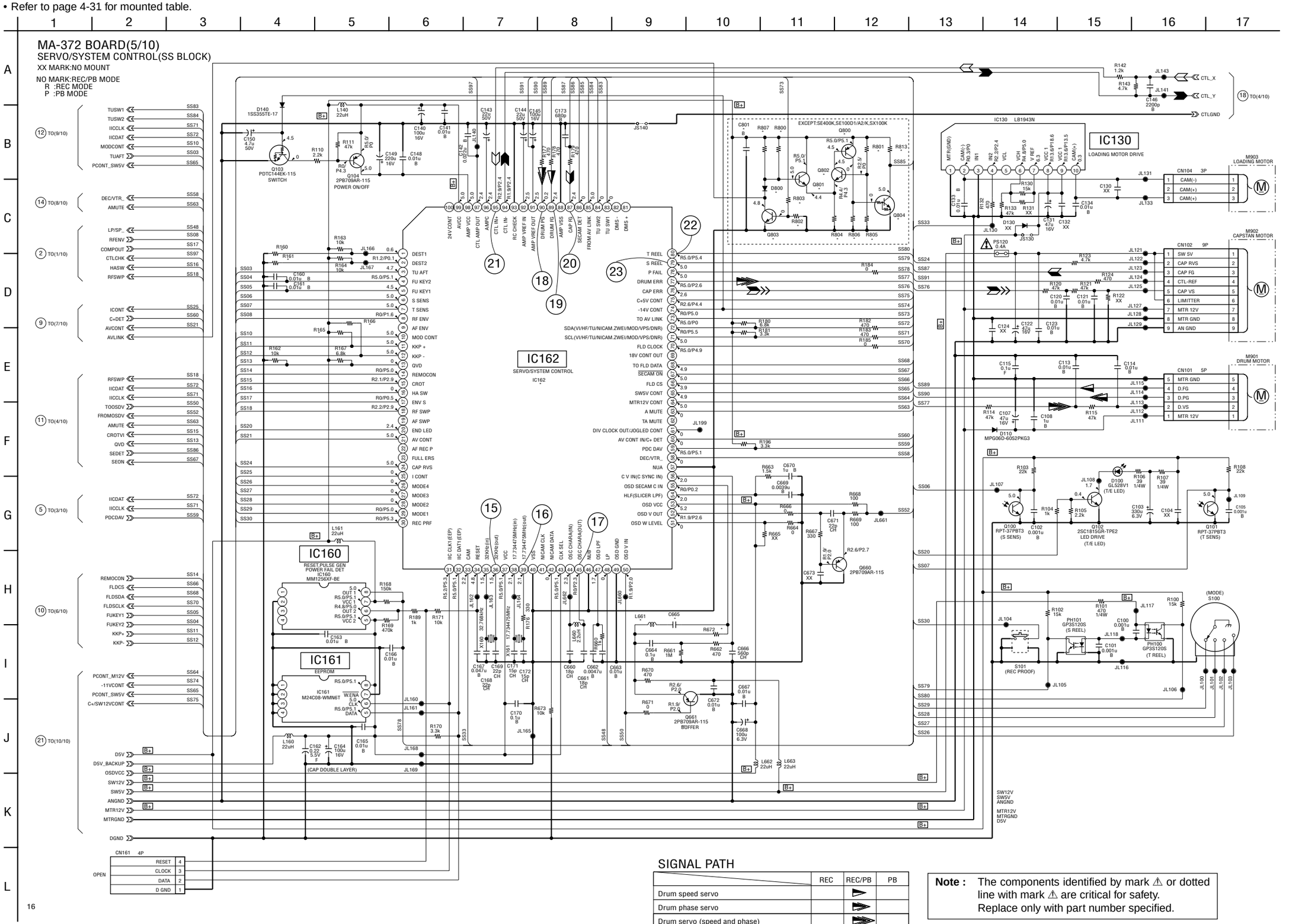
CN351 3P
AU GND
N.C.
FE HEAD

CN350 7P
A ERASE HEAD
AU GND
A HEAD REC
A HEAD PB
AU GND
CTL (Y)
CTL (X)

FULL ERASE HEAD
ACE HEAD
ERASE HEAD
AUDIO HEAD
CTL HEAD

For schematic diagram

- Refer to page 4-5 for printed wiring board.
- Refer to page 4-2 for waveforms.
- Refer to page 4-31 for mounted table.

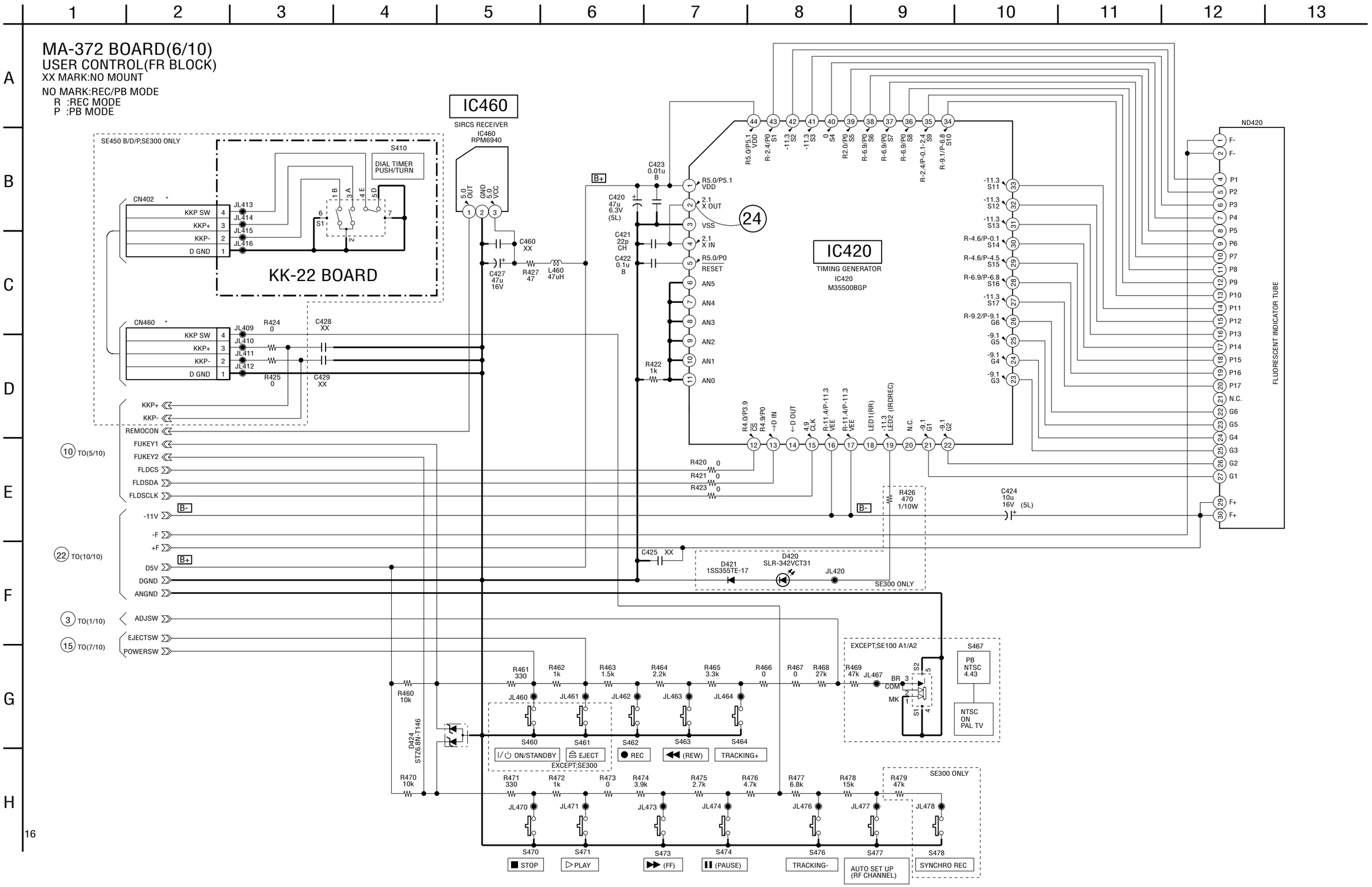


SIGNAL PATH

	REC	REC/PB	PB
Drum speed servo		▶	
Drum phase servo		▶	
Drum servo (speed and phase)		▶	
Capstan speed servo		▶	
Capstan servo (speed and phase)		▶	
Ref.signal	▶		▷

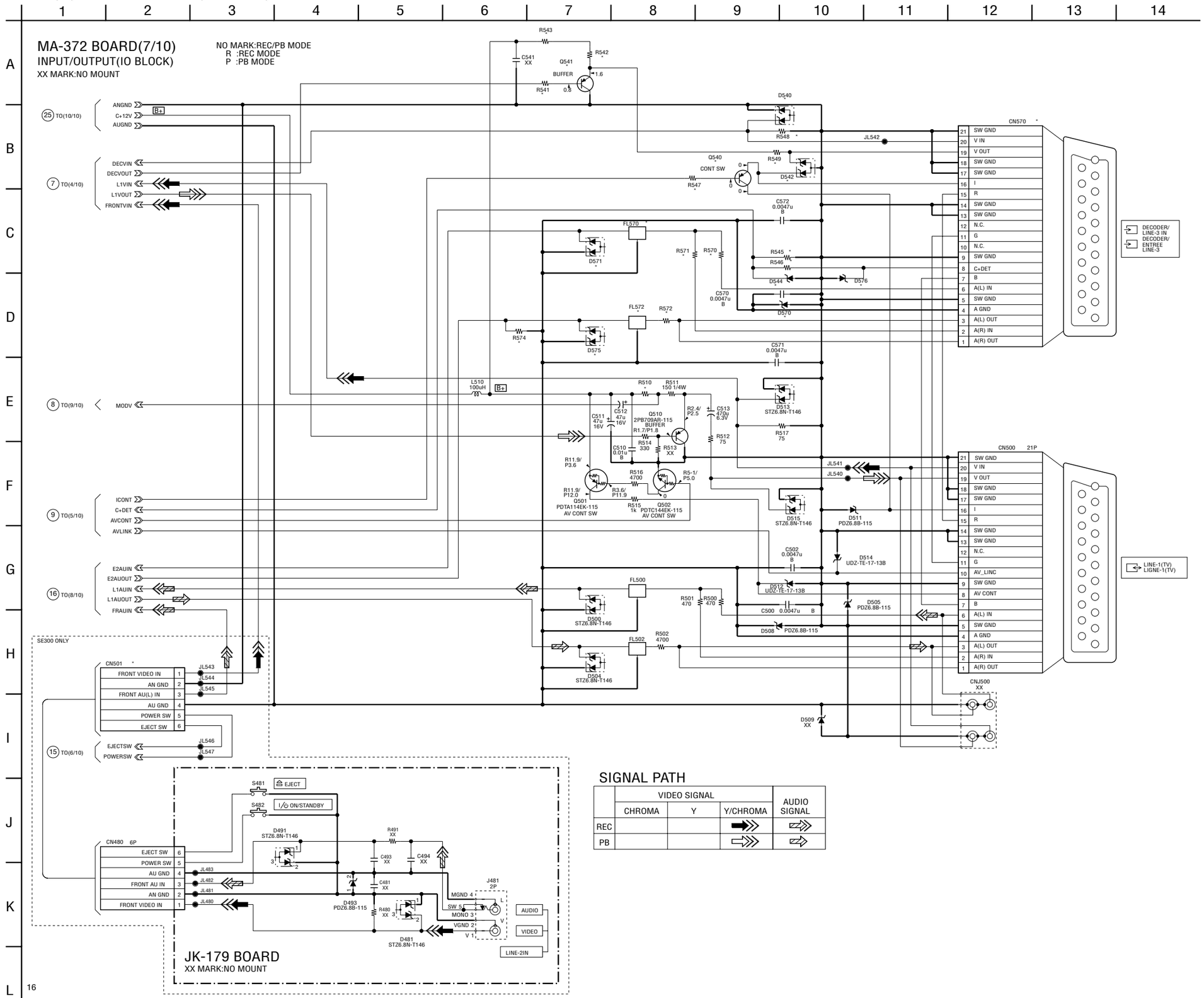
Note : The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

For schematic diagram
- Refer to page 4-5 for MA-372 board printed wiring board.
- Refer to page 4-27 for KK-22 board printed wiring board.
- Refer to page 4-2 for waveform.



For schematic diagram

- Refer to page 4-5 for MA-372 board printed wiring board.
- Refer to page 4-27 for JK-179 board printed wiring board.



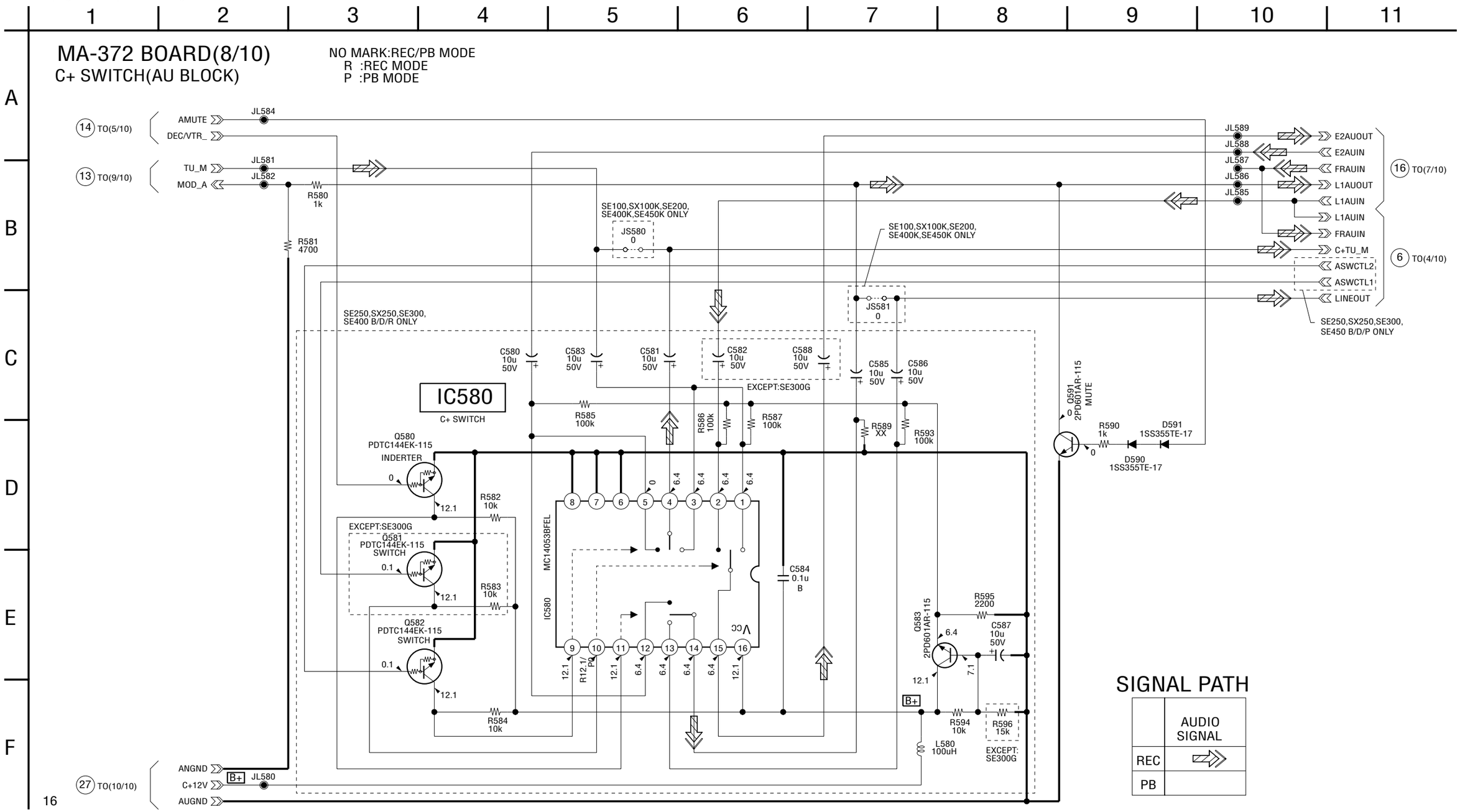
MA-372 BOARD (7/10)
***MARKED = MOUNT TABLE**

REF.NO	SE250, SE300D1/D2, SE450B/D/P, SX250D	SE300G	SE100, SE200, SE400, SE450K, SX100
CN570	21P		XX
D540	STZ6.8N-T146		XX
D542	STZ6.8N-T146		XX
D544	UDZS-TE17-6.8B		XX
D570	UDZS-TE17-6.8B		XX
D571	STZ6.8N-T146		XX
D575	STZ6.8N-T146		XX
D576	UDZS-TE17-13B		XX
FL570	○		XX
FL572	○		XX
Q540	2PB709AR-115		XX
Q541	2PB709AR-115		XX
R510	180		150
R541	100		XX
R542	180		XX
R543	150		XX
R545	33k		XX
R546	47k		XX
R547	1k		XX
R548	75		XX
R549	75		XX
R570	470		XX
R571	470		XX
R572	470		XX
R574	100k		XX

SIGNAL PATH

	VIDEO SIGNAL			AUDIO SIGNAL
	CHROMA	Y	Y/CHROMA	
REC			➡	⇨
PB			⇨	⇨

For schematic diagram
• Refer to page 4-5 for printed wiring board.

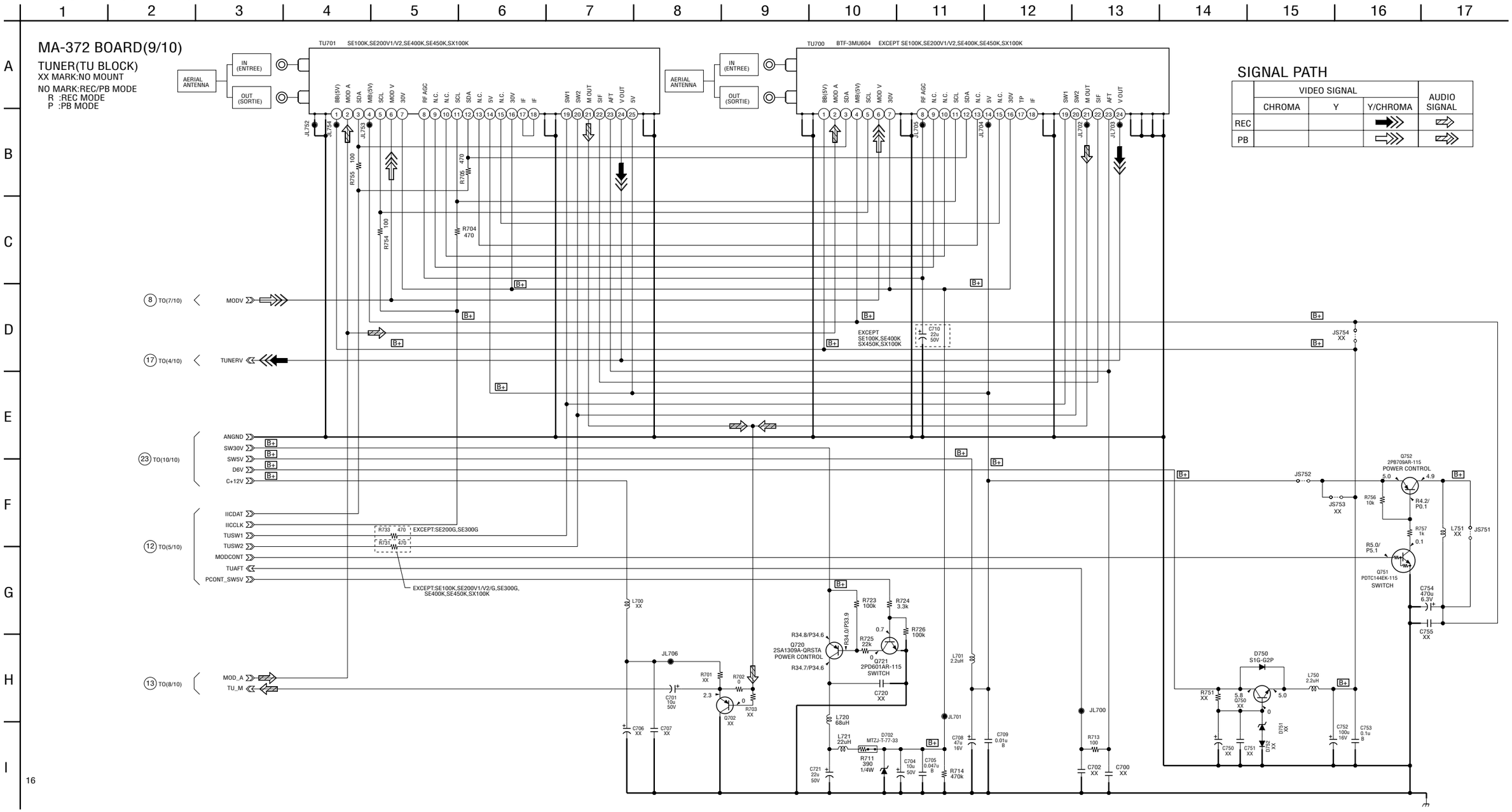


SIGNAL PATH

	AUDIO SIGNAL
REC	⇒
PB	

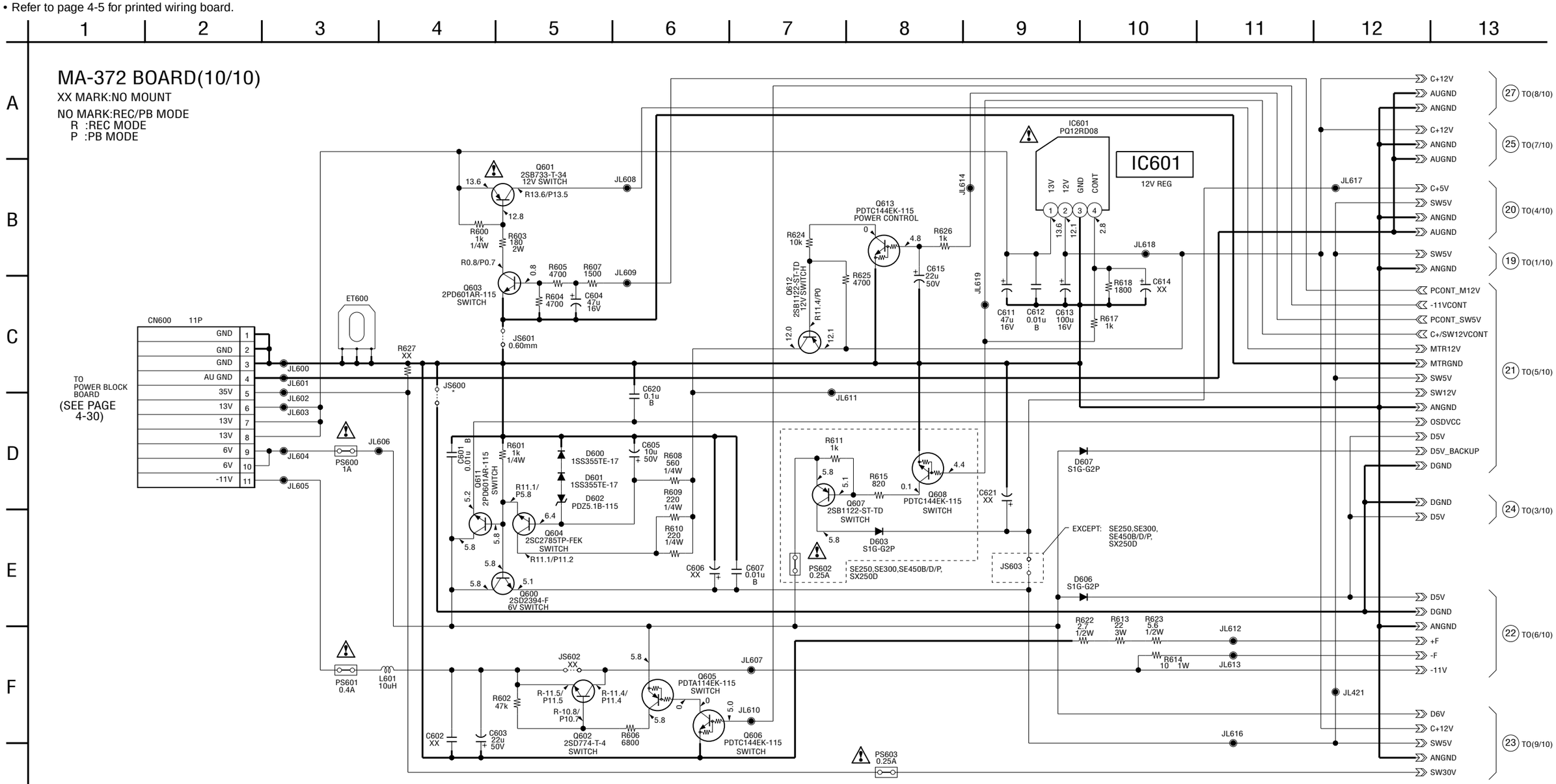
For schematic diagram

• Refer to page 4-5 for printed wiring board.



For schematic diagram

• Refer to page 4-5 for printed wiring board.



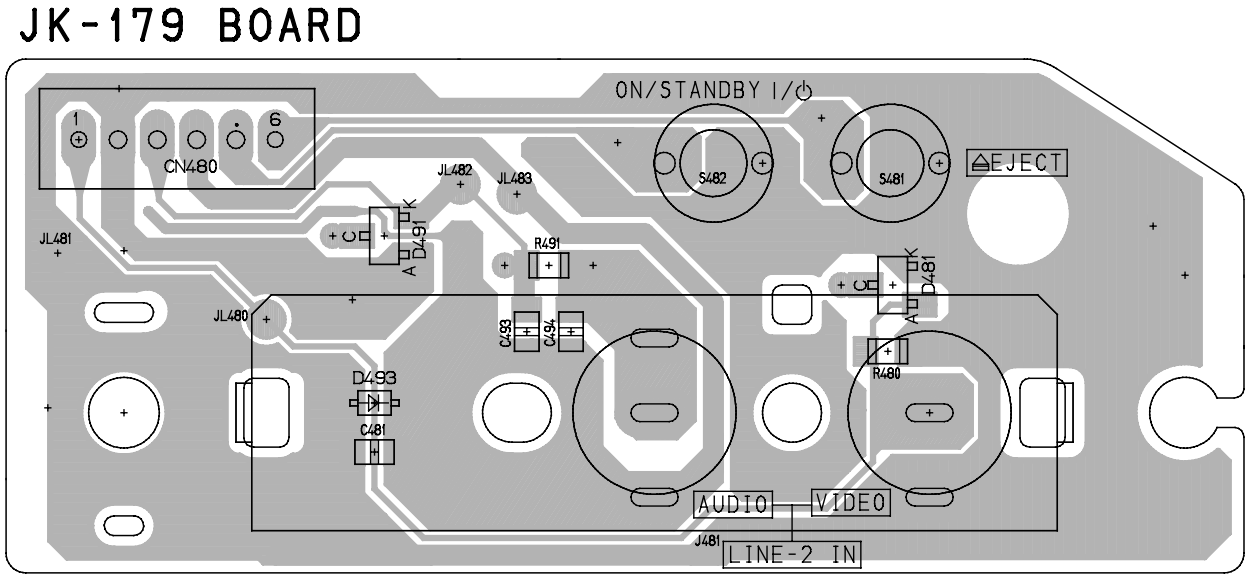
SIGNAL PATH

	VIDEO SIGNAL			AUDIO SIGNAL
	CHROMA	Y	Y/CHROMA	
REC	➡	➡	➡	⇨
PB	⇨	⇨	⇨	⇨

Note : The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

JK-179 (LINE-2 IN) PRINTED WIRING BOARD (SE300 only)

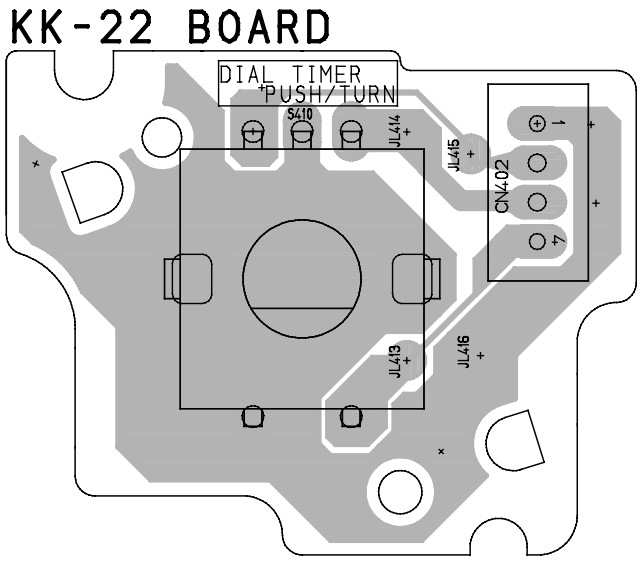
There are few cases that the part printed on this diagram isn't mounted in this model.



16

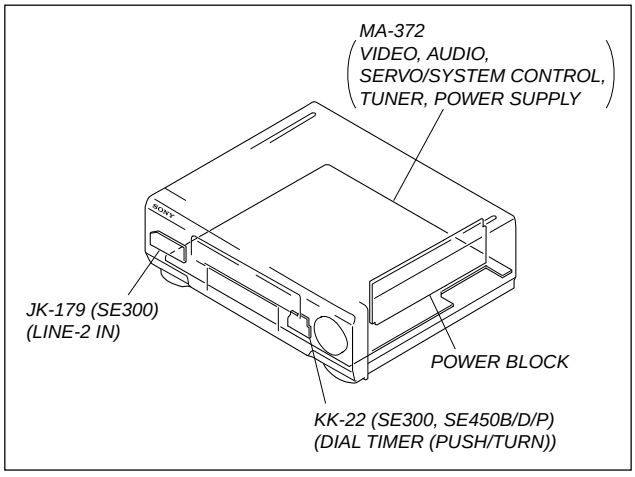
KK-22 (DIAL TIMER) PRINTED WIRING BOARD (SE300, SE450B/D/P only)

There are few cases that the part printed on this diagram isn't mounted in this model.



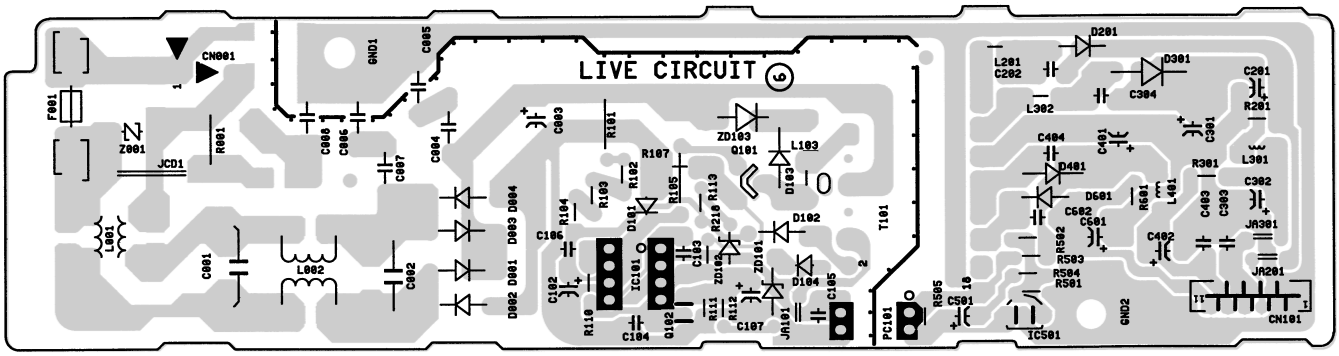
16

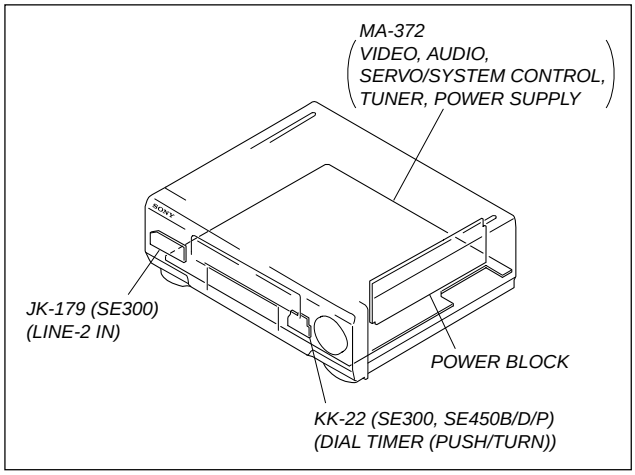
11

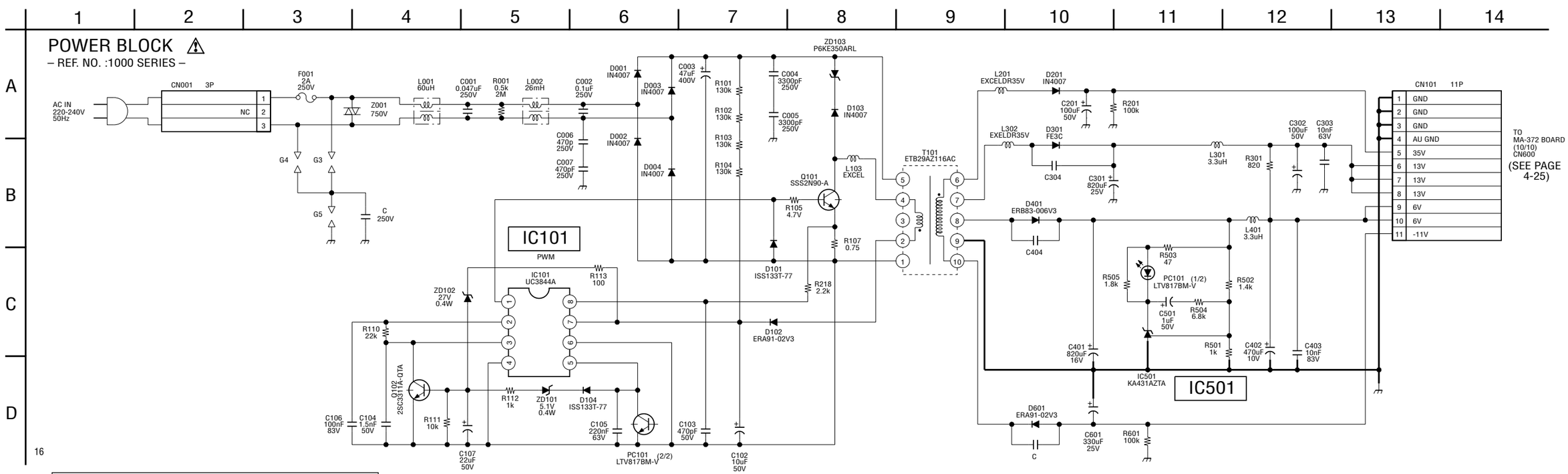


POWER SUPPLY BLOCK (SWITCHING REGURATOR) PRINTED WIRING BOARD

— Ref. No. :1,000 Series —







Note : The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

MA-372 BOARD (4/10)
***MARKED = MOUNT TABLE**

REF.NO	SE450			SE400	SE300		SE250		SX250	SE200		SE100	SX100
	B	D/P	K	K	G	D1/D2	B	D/P	D	G/I	V1/V2	A1/A2	K
C205	33p 50V CH				39p 50V CH								
C221	0.1u 25V CH				1u 25V B		0.1u 25V CH			1u 25V B			0.1u 25V CH
C239	×				47p 50V CH					×			
C240	47p 50V CH		×		47p 50V CH					×			
C241	×				0.1u 25V B					×			
C242	0.1u 25V B		×		0.1u 25V B					×			
C253	470p 50V CH	×					470p 50V CH	×					
C353	×				0.22u 16V B					×			
L206	47u	×					47u	×					
Q204	PDTC144EK	×					PDTC144EK	×					
R206	680				820								
R207	2.7k				820								
R216	330k				680k								
R217	100		×			100				×			
R222	×				47					×			
R223	47		×		47					×			
R228	0	×					0	×					
R232	33k				15k								
R233	4.7k	×			4.7k			×					
R352	×				68k					×			
R353	×				5.6k					×			

MA-372 BOARD (5/10)

REF.NO	SE450			SE400	SE300		SE250		SX250	SE200		SE100	SX100
	B	D/P	K	K	G	D1/D2	B	D/P	D	G/I	V1/V2	A1/A2	K
C665	56p 50V CH	×	56p 50V CH		×		56p 50V CH	×				56p 50V CH	
IC162	M37760MFH-215GP			M37760MFH-210GP									
L661	2uH	×	22uH		×		22uH	×					22uH
R160	5.6k	1.5k	8.2k		3.3k	×	5.6k	×		3.3k	×		8.2k
R161	3.3k	1.5k/×	3.3k	1.5k	3.3k	12k	×	5.6k/1.5k	5.6k	1.5k/8.2k	3.3k	×	
R165	3.3k		×		3.3k			×					
R166	3.3k		×		3.3k			×					
R672	1k	×	1k		×		1k	×					1k

SECTION 5
INTERFACE, IC PIN FUNCTION DESCRIPTION

5-1. SYSTEM CONTROL — VIDEO/RP BLOCK INTERFACE (MA-372 BOARD IC162)

Signal	Pin No.	I/O	STOP/ FF/REW	TAPE LOADING	TAPE UNLOADING	PB	REC	REC/PAUSE
RF SWP	MA-372 IC162 ⑱	O	*1	*1	*1	*1	*1	*1
QVD	MA-372 IC162 ⑬	O	L	L	L	*2	L	L
C.V.IN	MA-372 IC162 ⑯	I	*3	*3	*3	*3	*3	*3

*1 Synchronized with drum rotation. 25 Hz 50% duty pluse.
*2 Normally “L”. “H” when video signal is not generated.
*3 Composite sync signal (positive).

5-2. SYSTEM CONTROL — SERVO PERIPHERAL CIRCUIT INTERFACE (MA-372 BOARD IC162)

Signal	Pin No.	I/O	STOP	FF	REW	TAPE LOADING	TAPE UNLOADING	PB	REC
CTL +IN	MA-372 IC162 ⑮	I/O	*7	*7	*7	*7	*7	*7	*1
DRUM PG	MA-372 IC162 ⑩	I	*3	*3	*3	*3	*3	*3	*3
DRUM FG	MA-372 IC162 ⑨	I	*4	*4	*4	*4	*4	*4	*4
CAP FG	MA-372 IC162 ⑦	I	H/L	*2	*2	*5	*5	*2	*2
CAP RVS	MA-372 IC162 ㉔	O	H/L	L	H	L	H	L	L
CAP ERR	MA-372 IC162 ⑯	O	L	*6	*6	*6	*6	*6	*6
DRUM ERR	MA-372 IC162 ⑰	O	*6	*6	*6	*6	*6	*6	*6

*1. 25 Hz pulse.
*2. Pulse in period in proportion to tape speed.
*3. 25 Hz “H” pulse.
*4. 330 Hz pulse.
*5. Unstable period pulse.
*6. DC voltage 1 to 5V.
*7. Hi-Z (2.5 V)

5-3. SYSTEM CONTROL — MECHANISM BLOCK INTERFACE (MA-372 BOARD IC162)

Signal	Pin No.	I/O	EJECTED	CASSETTE LOADING	CASSETTE UNLOADING	TAPE THREADING	TAPE UNTHREADING	STOP	FF	REW	PB	REC
CAM	MA-372 IC162 ㉝	O	M	H/M	L/M	H/M	L/M	M	M	M	M	M
MODE 1	MA-372 IC162 ㉙	I	H	—	—	L	L	H	H	H	H	H
MODE 2	MA-372 IC162 ㉘	I	H	—	—	L	L	H	H	H	L	L
MODE 3	MA-372 IC162 ㉗	I	L	—	—	H	H	H	L	L	L	L
MODE 4	MA-372 IC162 ㉖	I	L	—	—	H	H	L	H	H	L	L
REC PRF	MA-372 IC162 ㉚	I	L	*1	*1	*1	*1	*1	*1	*1	*1	*1
T REEL	MA-372 IC162 ㊿	I	H/L	H/L	H/L	H/L	H/L	H/L	*2	*2	*2	*2
S REEL	MA-372 IC162 ㊾	I	H/L	H/L	H/L	*2	*2	H/L	*2	*2	*2	*2
END LED	MA-372 IC162 ⑳	O	L	*3	*3	*3	*3	*3	*3	*3	*3	*3
T SENS	MA-372 IC162 ⑦	I	*3	*3	*3	*4	*4	*4	*4	*4	*4	*4
S SENS	MA-372 IC162 ⑥	I	*3	*3	*3	*4	*4	*4	*4	*4	*4	*4

*1. “L” when erasing protection tab is bent. “H” when not bent.
*2. Pulse of period in proportion to reel rotating speed.
*3. Approx. 2 msec period “H” pulse.
*4. Normally “L”. 2 msec period “H” pulse when tape top or tape end is detected.
*5. Hi-Z

5-4. SYSTEM CONTROL — SYSTEM CONTROL PERIPHERAL CIRCUIT INTERFACE (MA-372 BOARD IC162)

Signal	Pin No.	I/O	I/O level
RESET	MA-372 IC162 ㉞	I	Normal “H” , “L” when seryvice Interruption is detected or restored.

5-5. SYSTEM CONTROL — AUDIO BLOCK INTERFACE (MA-372 BOARD IC162)

Signal	Pin No.	I/O	STOP/ FF/REW	TAPE LOADING	TAPE UNLOADING	PB	REC	REC/PAUSE
A MUTE	MA-372 IC162 ㊸	O	L	L	L	L	L	H

5-6. SERVO/SYSTEM CONTROL MICROPROCESSOR PIN FUNCTIONS (MA-372 BOARD IC162)

Pin No.	Pin Name	I/O	Function
1	DEST1	I	Destination identification input 1
2	DEST2	I	Destination identification input 2
3	TU AFT	I	AFT input from TUNER for station selection
4	FU KEY2	I	Function key input (9 keys)
5	FU KEY1	I	Function key input (9 keys)
6	S SENS	I	Tape end sensor input
7	T SENS	I	Tape top sensor input
8	RF ENV	I	Video RF envelope input
9	N.C.	—	N.C.
10	MOD CONT	O	RF modulator ON/OFF control
11	KKP+	I	KKP 2-phase pulse B input
12	KKP–	I	KKP 2-phase pulse A input
13	QVD	O	Pseudo VD output
14	REMOCON	I	Remote control SIRCS signal input
15	CROT	O	Head azimuth information
16	HA SW	O	SP/EP head switching signal
17	ENV S	I	Identification signal of SP/EP head output comparison & detection
18	RF SWP	O	Video RF switching pulse output
19	AF SWP	O	N.C.
20	END LED	O	End sensor LED output
21	AV CONT	O	EURO 21 pin AV CONT signal output
22	AF REC P	O	N.C.
23	FULL ERS	O	N.C.
24	CAP RVS	O	Inverted capstan signal
25	I CONT	O	EURO 21 pin-I CONT signal output
26	MODE 4	I	Cam encode data 4
27	MODE 3	I	Cam encode data 3
28	MODE 2	I	Cam encode data 2
29	MODE 1	I	Cam encode data 1
30	REC PRF	I	Safety tab detection input
31	IIC CLK1 (EEP)	O	I2C clock (EEPROM control)
32	IIC DATA1 (EEP)	I/O	I2C data (EEPROM control)
33	CAM	O	Cam motor control signal
34	RESET	I	Reset input
35	32kHz (IN)	I	Sub clock input
36	32kHz (OUT)	O	Sub clock output
37	Vcc		Power supply input terminal (high speed mode: 4.0 to 5.5 V, low speed mode: 2.6 to 5.5 V)
38	17.734475MHz (IN)	I	Main clock input
39	17.734475MHz (OUT)	O	Main clock output
40	Vss		Ground terminal
41	NICAM. CLK	O	N.C.
42	NICAM. DATA	O	N.C.
43	CLK SEL	I	Selection of oscillation clock when reset is canceled. L: sub clock, H: main & sub clocks
44	OSC CHARA (IN)	I/O	Clock input for OSD character size
45	OSC CHARA (OUT)	I/O	Clock output for OSD character size
46	NUB		Connected to Ground
47	OSD LPF	I/O	External filter that doubles the fsc, is connected to this terminal
48	LP	O	“L” at SP. “H” at EP/LP.
49	OSD GND		Ground terminal of OSD/slicer
50	OSD V IN	I	Video signal input for OSD overlay

Pin No.	Pin Name	I/O	Function
51	OSD W LEVEL	I	OSD white level input
52	OSD V OUT	O	OSD video signal output
53	OSD Vcc		Power supply input terminal for OSD/slicer (4.75 V to 5.25 V)
54	HLF (SLICER LPF)	I/O	LPF connection terminal for slicer/AFC (This terminal is used as the HLF terminal when C. Video is input to pin-56.)
55	OSD SECAM C IN	I	Color signal input for SECAM OSD
56	C V IN (C SYNC IN)	I	Video signal input for tuner's station selection, OSD and servo sync signal detection (after passing filter)
57	NUA		Connected to Ground
58	DEC/VTR	O	Decoder/VTR switching
59	PDC DAV	I	PDC/VPS signal reception identification input
60	AV CONT IN/C+DET	I	CANAL+ connection identification input
61	DIV CLK OUT/JOG LED CONT	O	Terminal of using JOGLED output or adjustment mode output of clock dividing frequency
62	TA MUTE	O	Tuner audio mute signal output
63	A MUTE	O	Audio mute signal output
64	MTR 12V CONT.	O	Motor 12 V power control signal
65	SW 5V CONT.	O	SW 5 V power control signal
66	FLD CS	O	Chip selection signal for display tube driver
67	$\overline{\text{SECAM ON}}$	O	SECAM ON signal/surround audio control (switched by destination)
68	TO FLD DATA	O	Serial data out CH0 (FLD)
69	18V CONT	O	N.C.
70	FLD CLOCK	O	Serial clock CH0 (FLD)
71	SCL (VI/HF/TU/NICAM ZWEI/MOD/VPS/DNR)	I/O	I2C clock (video/HiFi/tuner/ARC/modulator/VPS control)
72	SDA (VI/HF/TU/NICAM ZWEI/MOD/VPS/DNR)	I/O	I2C data (video/HiFi/tuner/ARC/modulator/VPS control)
73	TO AV LINK	O	SMART LINK data output for communication
74	–14V CONT	O	Power save control
75	C+ 5V CONT	O	Power save control
76	CAP ERROR	O	Capstan error output
77	DRUM ERROR	O	Drum error output
78	P FAIL	I	Power failure detection input
79	S REEL	I	Supply reel sensor input
80	T REEL	I	Take up reel sensor input
81	DMS+	I	N.C.
82	DMS–	I	N.C.
83	TU SW1	O	Turner system BG/L selection signal
84	TU SW2	O	Turner system BGL/L selection signal
85	FROM AV LINK	I	SMART LINK data input for communication
86	SECAM DET	I	SECAM identification input
87	CAP FG	I	Capstan FG input
88	AMP Vss		Ground terminal for analog amplifier (connected to Vss)
89	DRUM FG	I	Drum FG input
90	DRUM PG	I	Drum PG input
91	AMP VREF OUT		Analog amplifier reference power supply output terminal
92	AMP VREF IN		Analog amplifier reference power supply output terminal
93	RC CHECK	I	No use (Fix to "L" on the outside for the terminal only for the input)
94	CTL –IN	I/O	CTL signal input/output terminal
95	CTL +IN	I/O	CTL signal input/output terminal
96	AMP C		CTL amplifier AC Ground terminal
97	CTL AMP OUT	O	CTL amplifier output
98	AMP Vcc		Power supply input terminal for analog amplifier (connected to Vcc)
99	AVcc		Power supply input and reference voltage input to A-D converter
100	24V CONT	O	N.C.

5-7. MODE CONTROL PIN FUNCTIONS (MA-372 BOARD IC420)

Pin No.	Pin Name	I/O	Function
1	VDD		D5V
2	X OUT	O	X' tal out
3	VSS		Ground.
4	X IN	I	X' tal in
5	$\overline{\text{RESET}}$	I	RESET input.
6	AN5		Ground.
7	AN4		Ground.
8	AN3		Ground.
9	AN2		Ground.
10	AN1		Ground.
11	AN0		Ground.
12	$\overline{\text{CS}}$	O	FLD chip select signal out.
13	D IN	I	FLD IIC BUS (data) input.
14	D OUT	O	Not connect.
15	CLK	O	FLD clock.
16	VEE		–11V
17	VEE		–11V
18	LED1 (RR)	O	RR LED control signal output.
19	LED2 (IRDREC)	O	IRDREC LED control signal output.
20	NC		Not Connect.
21	G1	O	Grid terminal 1.
22	G2	O	Grid terminal 2.
23	G3	O	Grid treminal 3.
24	G4	O	Grid treminal 4.
25	G5	O	Grid treminal 5.
26	G6	O	Grid treminal 6.
27	S17	O	Segment terminal 17.
28	S16	O	Segment terminal 16.
29	S15	O	Segment terminal 15.
30	S14	O	Segment terminal 14.
31	S13	O	Segment terminal 13.
32	S12	O	Segment terminal 12.
33	S11	O	Segment terminal 11.
34	S10	O	Segment terminal 10.
35	S9	O	Segment terminal 9.
36	S8	O	Segment terminal 8.
37	S7	O	Segment terminal 7.
38	S6	O	Segment terminal 6.
39	S5	O	Segment terminal 5.
40	S4	O	Segment terminal 4.
41	S3	O	Segment terminal 3.
42	S2	O	Segment terminal 2.
43	S1	O	Segment terminal 1.
44	VDD		D5V

MEMO

SECTION 6
ADJUSTMENTS

6-1. MECHANICAL ADJUSTMENTS

For the mechanical adjustments, please refer to the "VHS MECHANICAL ADJUSTMENT MANUAL Ⅵ (S MECHANISM)" (9-921-647-11).

6-2. ELECTRICAL ADJUSTMENTS

See the adjusting part location diagram from on page 6-4 for the adjustment.

2-1. PREPARATION BEFORE ADJUSTMENT

2-1-1. Equipment Required

The measuring instruments used for this alignment include:

1) Monitor TV
2) Oscilloscope, dual-trace, bandwidth of 30 MHz or more, with delay mode (A probe 10:1 should be used unless otherwise specified.)
3) Frequency counter
4) PAL Pattern generator
5) Remote commander
6) Digital voltmeter
7) Audio generator
8) Audio level meter
9) Audio attenuator
10) Alignment tapes
    KRV-51P (PAL) Part No. : 8-192-955-57

2-1-2. Equipment Connection

Unless otherwise specified, connect and adjust the measuring instruments as shown in the following diagram.

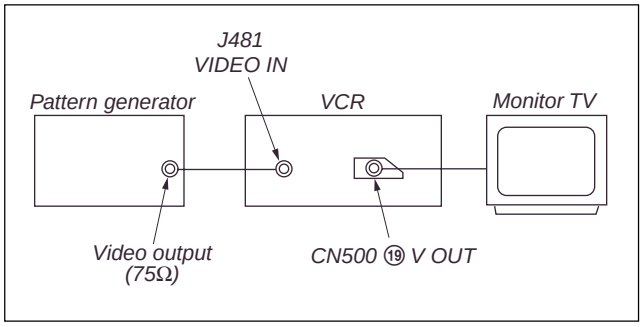


Fig. 6-2-1

2-1-3. Set-up of Adjustment

In this adjustment, PAL pattern generator is connected with LINE-2 input terminal. When check to tuner, connected AERIAL terminal. Check that the synchronizing signal of the Y signal has an amplitude of approximately 0.7 V and that the burst signal has an amplitude of approximately 0.3 V and its waveform is flat. And check that the level ratio of burst signal to "red" signal is 0.30 : 0.66. The video signal (color bar) used for electrical aligning this unit is shown in Fig. 6-2-2.

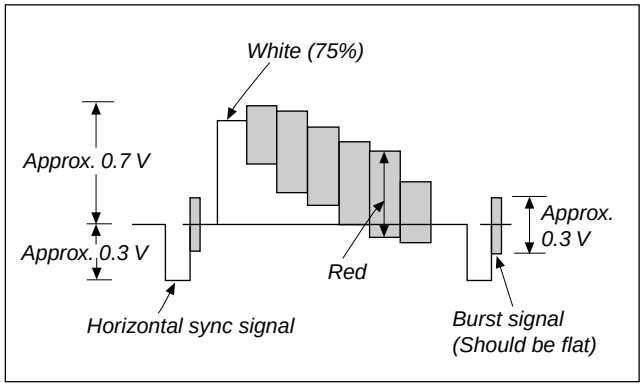


Fig. 6-2-2 Color Bar Signals of Pattern Generator

2-1-4. Alignment Tape

• Contents of KRV-51P

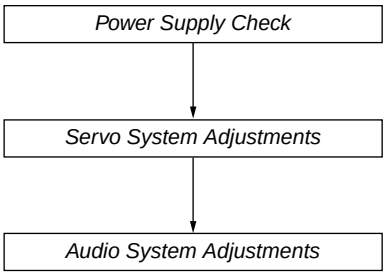
	Mode	Period	Video signal	Audio signal	
				Hi-Fi	Normal
1	SP	7 minutes	Color bar	400Hz (L/R)	400Hz
2		3 minutes	Monoscope		
3	LP	7 minutes	Color bar		
4		3 minutes	Monoscope		

2-1-5. Input/Output Levels and Impedance

Video input: LINE-1 (TV)/LINE-2 IN
Input signal: 1 Vp-p, 75 ohms, unbalanced, sync negative
Video output: LINE-1 (TV)
Output signal: 1 Vp-p, 75 ohms, unbalanced, sync negative
Audio input: LINE-1 (TV)/LINE-2 IN
Input level: –7.5 dBs
(0 dBs= 0.775 Vrms)
Input impedance: more than 47 kilohms
Audio output: LINE-1 (TV)
Standard level: –7.5 dBs at load impedance 47 kilohms
Output impedance: less than 10 kilohms

2-1-6. Adjustment Sequence

The adjustments should be performed in the following sequence.



2-2. POWER SUPPLY CHECK

2-2-1. Output Voltage Check (MA-372 Board)

Mode	STANDBY
D5 V Check	
Measurement point	Cathode of D606
Specified value	4.8 to 5.4 V

Mode	E-E
–11 V Check	
Measurement point	Corrector of Q602
Specified value	–13.5 to – 9.5 V
SW +12 V Check	
Measurement point	IC601 pin ② or corrector of Q612
Specified value	11.7 to 12.3 V
SW +5 V Check	
Measurement point	Emitter of Q600
Specified value	4.8 to 5.4 V
MTR12 V Check	
Measurement point	Corrector of Q601
Specified value	12.6 to 13.6 V
SW +30 V Check	
Measurement point	Corrector of Q720
Specified value	33.5 to 36.5 V

[Check Method]

1) Each of these supply voltages must meet its specified value.

2-3. SERVO SYSTEM CHECK

2-3-1. RF Switching Position Adjustment (MA-372 Board)

[Adjustment Purpose]

To adjust the link of the A-ch and B-ch of the tape playback outputs. To make the unit compatible with other tapes and units. If this specification is not satisfied, the link will appear on the screen and the screen will be disrupted, etc.

Mode	Playback
Signal	Alignment tape: SP color bar portion
Measurement point	CH1: CN262 pin ① (PB RF) CH2: CN262 pin ② (RF SWP)
Measuring instrument	Oscilloscope
Adjusting element	Remote commander CH+/–
Specified value	A=minimize

[Adjustment Method]

1) Playback the alignment tape.
2) Short CN262 pin ⑤ to Ground.
3) Check that "A P" is indicated on FL display.
4) Adjust so that part A becomes minimized at CH +/–.
5) Write data in EEPROM by pressing PAUSE button.
6) The display "A P" disappears and then the Adjustment mode terminates.

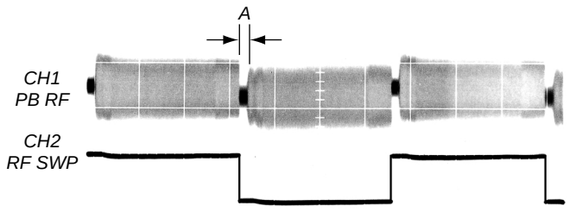


Fig. 6-2-3

2-4. AUDIO SYSTEM ADJUSTMENT

[Connecting Instruments]

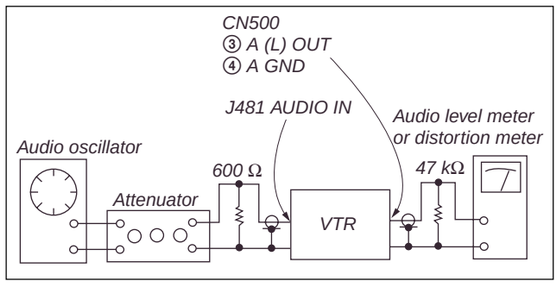


Fig. 6-2-4

2-4-1. Normal Audio System Adjustment

- Make adjustment in the SP mode unless otherwise specified. Use a normal VHS cassette for an adjustment tape.
- Set AUDIO MONITOR to normal.

2-4-2. ACE Head Adjustment

Refer to the VHS mechanical adjustment manual Ⅵ (S MECHANISM) (9-921-647-11).

2-4-3. E-E Output Level Check

[Adjustment purpose]

Confirm that the output level adjust the reference input is within the specification.

Mode	E-E
Signal	400 Hz, –6.3 dBs
Measurement point	CN500 Pin ③
Measuring instrument	Audio level meter
Specified value	–6.3 ± 2 dBs

[Check Method]

1) Input signal of 400 Hz and –6.3 dBs to the J480.
2) Check that the audio output level is –6.3 ± 2 dBs.

2-4-4. Frequency Response Check

[Adjustment purpose]

Confirm that the frequency characteristic is within the specification.

Mode	REC and PB (SP mode)
Signal	400 Hz, –26.3 dBs 7 kHz, –26.3 dBs
Measurement point	CN500 Pin ③
Measuring instrument	Audio level meter
Specified value	0 ± 3 dB

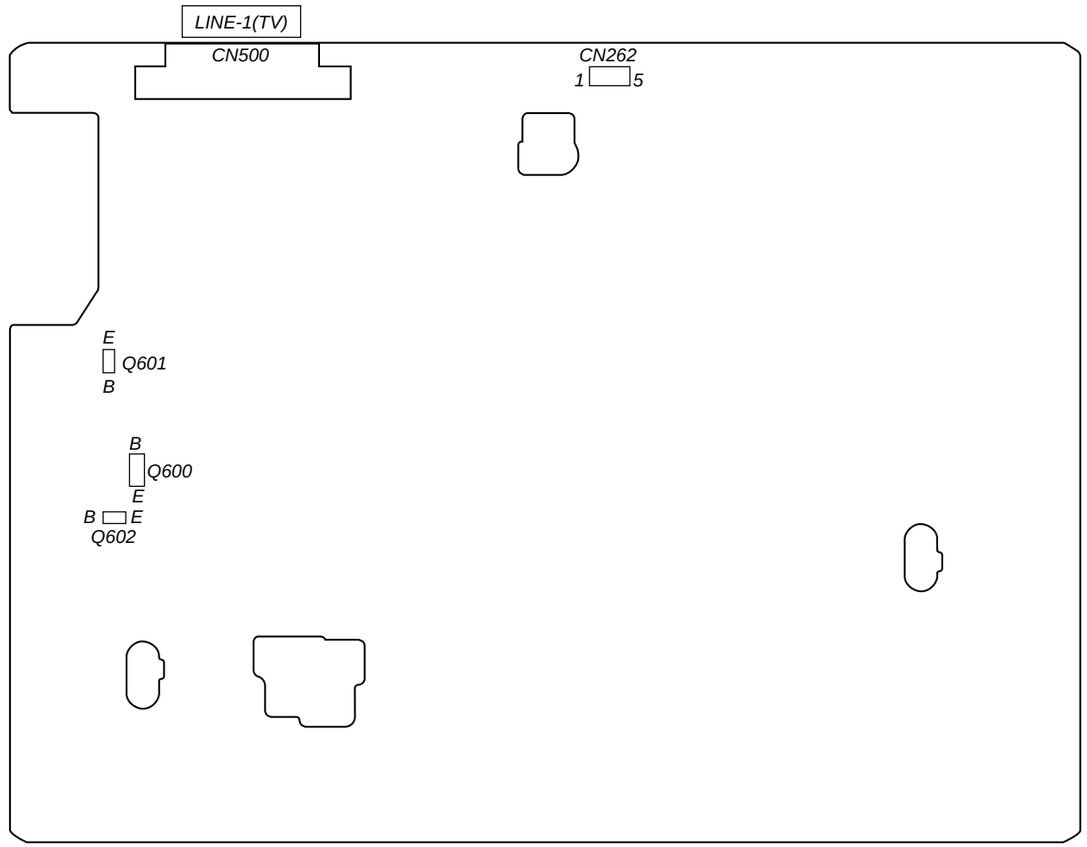
Note: Tape path adjustment must have been completed.

[Confirmation Method]

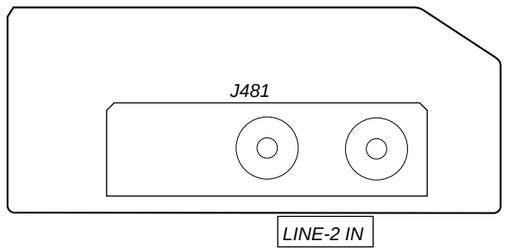
1) Supply a signal of 400 Hz, –26.3 dBs to J481 AUDIO IN.
2) Connect the audio level meter to CN500 Pin ③.
3) Adjust the attenuator so that the audio level meter will indicate –26.3 dBs.
4) Make recording in the SP mode.
5) Set an audio line input signal to 7 kHz and make recording.
6) Playback a recorded portion, and measure output levels at 400 Hz and 7 kHz.
7) Confirm that the 7 kHz playback output level within a range of the 400 Hz playback output level 0 dB to ± 3 dB.

2-5. ADJUSTING PARTS LOCATION DIAGRAM

MA-372 BOARD (CONDUCTOR SIDE)



JK-179 BOARD (CONDUCTOR SIDE)



MEMO

SECTION 7
REPAIR PARTS LIST

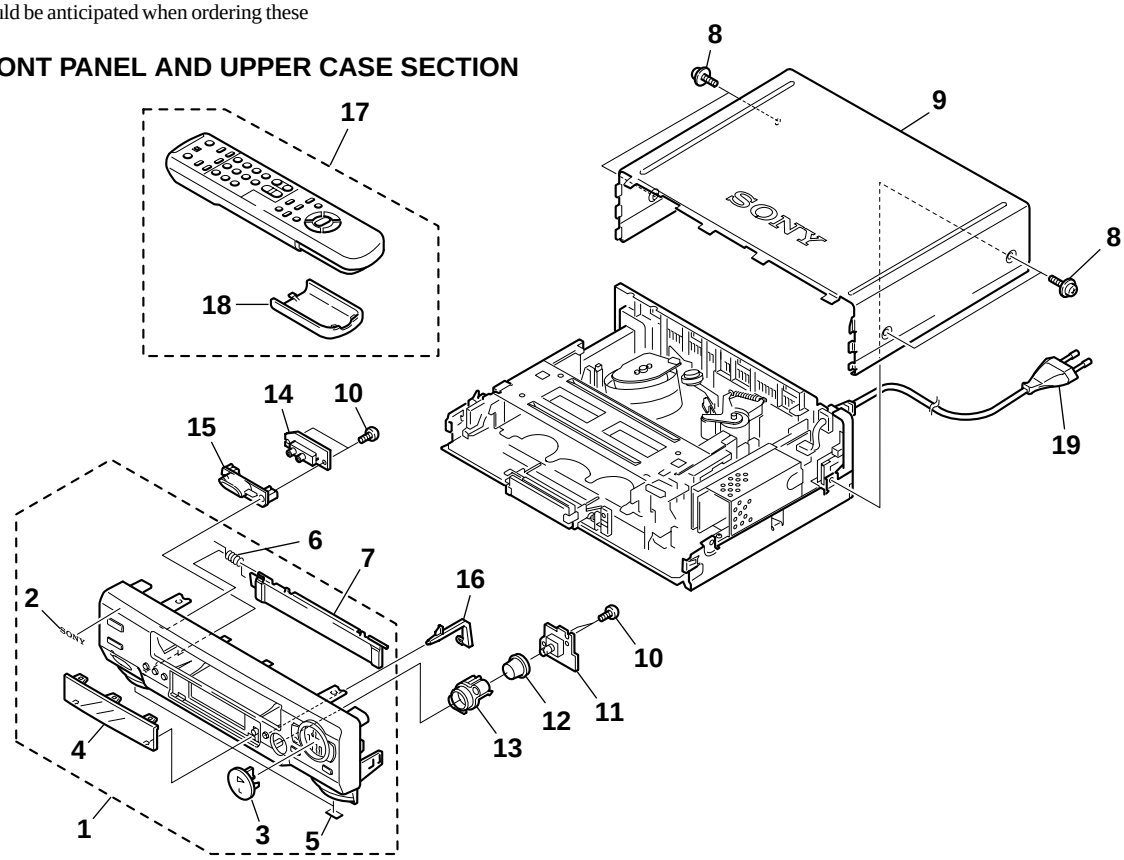
7-1. EXPLODED VIEWS

NOTE:

- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.

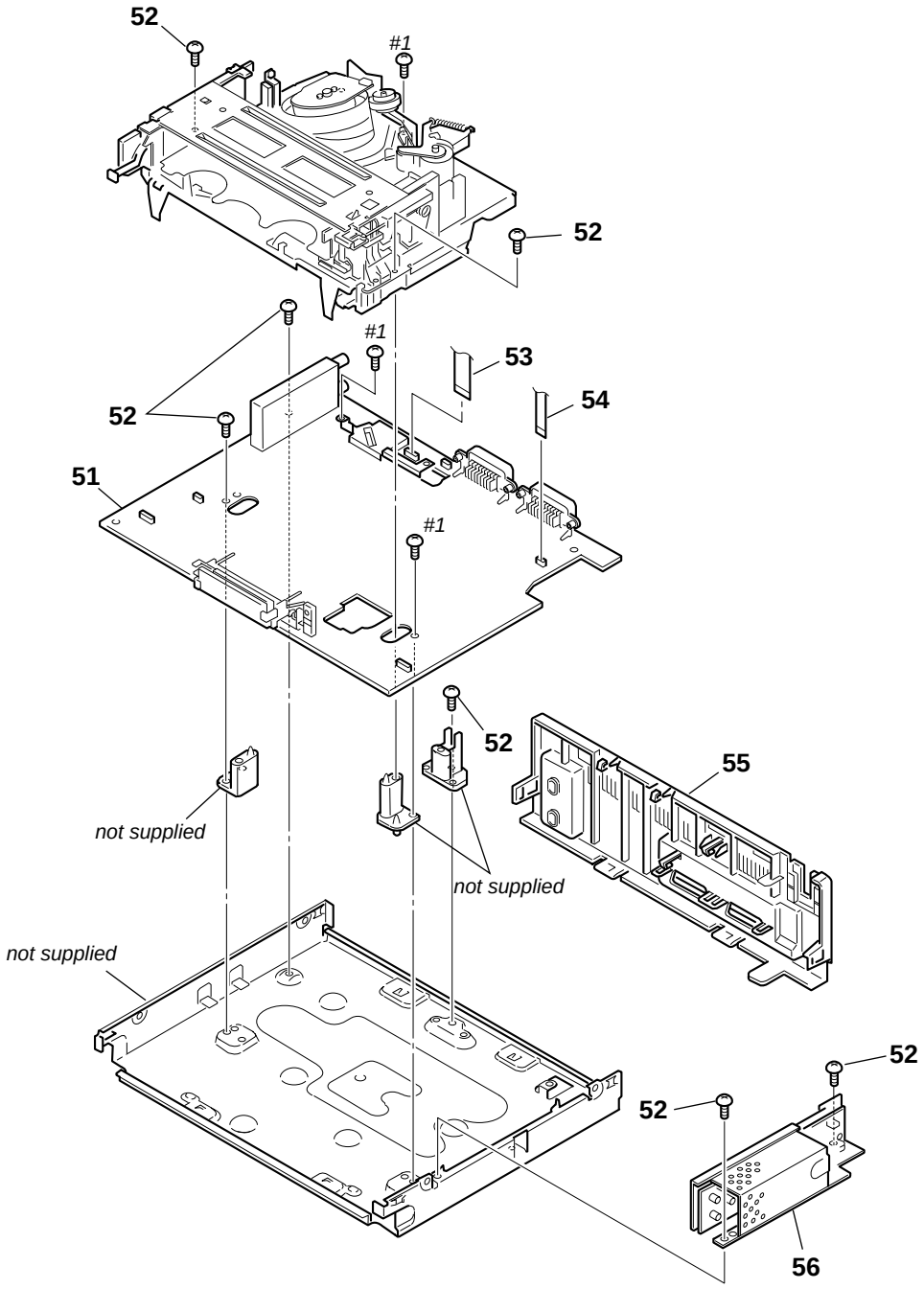
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

7-1-1. FRONT PANEL AND UPPER CASE SECTION



Ref. No.	Part No.	Description	Remarks
1	X-3950-180-1	PANEL ASSY, FRONT (SE450D)	
1	X-3950-181-1	PANEL ASSY, FRONT (SE450B)	
1	X-3950-182-1	PANEL ASSY, FRONT (SE450P)	
1	X-3950-183-1	PANEL ASSY, FRONT (SE300G)	
1	X-3950-184-1	PANEL ASSY, FRONT (SE300D1/D2)	
1	X-3950-185-1	PANEL ASSY, FRONT (SE250D)	
1	X-3950-186-1	PANEL ASSY, FRONT (SE250B)	
1	X-3950-187-1	PANEL ASSY, FRONT (SE250P)	
1	X-3950-188-1	PANEL ASSY, FRONT (SX250D)	
1	X-3950-189-1	PANEL ASSY, FRONT (SE200G/I)	
1	X-3950-190-1	PANEL ASSY, FRONT (SE200V1/V2)	
1	X-3950-191-1	PANEL ASSY, FRONT (SE100A1/A2)	
1	X-3950-192-1	PANEL ASSY, FRONT (SE450K)	
1	X-3950-193-1	PANEL ASSY, FRONT (SE400K)	
1	X-3950-194-1	PANEL ASSY, FRONT (SE100K)	
1	X-3950-195-1	PANEL ASSY, FRONT (SX100K)	
2	3-053-436-01	EMBLEM (NO.5), SONY (EXCEPT:SE200G/I,SE300G,SX100K,SX250D)	
3	3-057-833-01	BUTTON, CENTER (EXCEPT:SE200G/I,SE250B,SE300G,SE450B,SX100K,SX250D)	
3	3-057-833-11	BUTTON, CENTER (SE250B,SE450B)	
3	3-057-833-21	BUTTON, CENTER (SE200G/I,SE300G,SX100K,SX250D)	
4	3-057-845-01	PLATE, FROSTED (EXCEPT:SE100A1/A2/K,SE400K,SX100K)	
4	3-057-845-11	PLATE, FROSTED (SE100A1/A2/K,SE400K,SX100K)	
5	3-058-056-01	SEAL,INSULATOR	
6	3-953-432-01	SPRING (GE), FL	
7	3-057-841-21	DOOR,CASSETTE (EXCEPT:SE200G/I,SE300G,SX100K,SX250D)	
7	3-057-841-31	DOOR,CASSETTE (SE200G/I,SE300G,SX100K,SX250D)	
8	3-363-099-01	SCREW(CASE 3 TP2) (EXCEPT:SE200G/I,SE300G,SX100K,SX250D)	
8	3-363-099-11	SCREW(CASE 3 TP2) (SE200G/I,SE300G,SX100K,SX250D)	
9	3-058-423-21	CASE,UPPER (E) (EXCEPT:SE200G/I,SE300G,SX100K)	
9	3-058-423-31	CASE,UPPER (E)(SE200G/I,SE300G,SX100K)	
10	4-921-277-41	SCREW (B2.6X8), TAPPING, BIND (SE300D1/D2/G,SE450B/D/P)	
11	A-6794-738-A	KK-22A MOUNT (SE300D1/D2/G,SE450B/D/P)	
12	3-057-848-01	ESCUTCHEON, DIAL TIMER (SE300D1/D2,SE450B/D/P)	
12	3-057-848-11	ESCUTCHEON, DIAL TIMER (SE300G)	
13	3-057-852-01	KNOB, DIAL TIMER (SE300D1/D2,SE450B/D/P)	
13	3-057-852-11	KNOB, DIAL TIMER (SE300G)	
14	A-6794-737-A	JK-179A MOUNT (SE300D1/D2/G)	
15	3-057-846-01	HOLDER, PIN JACK (SE300D1/D2)	
15	3-057-846-11	HOLDER, PIN JACK (SE300G)	
16	3-057-847-01	LENSSS (SE300D1/D2/G)	
17	1-418-008-11	COMMANDER, STANDARD (RMT-V257) (SE100A1/A2/K,SE200V1/V2,SX100K)	
17	1-418-008-21	COMMANDER, STANDARD(RMT-V257A) (SE250B)	
17	1-418-008-31	COMMANDER, STANDARD(RMT-V257B) (SE200G/I/D/P,SE450D/P/K,SX250D)	
17	1-418-008-41	COMMANDER, STANDARD(RMT-V257C) (SE450B)	
17	1-418-781-11	COMMANDER, STANDARD (RMT-V287) (SE300D1/D2/G)	
18	3-709-433-01	COVER, REMOTE CONTROL BATTERY (FOR RMT-V257,V257A,V257B,V257C,V287)	
⚠19	1-777-854-21	CORD, POWER	

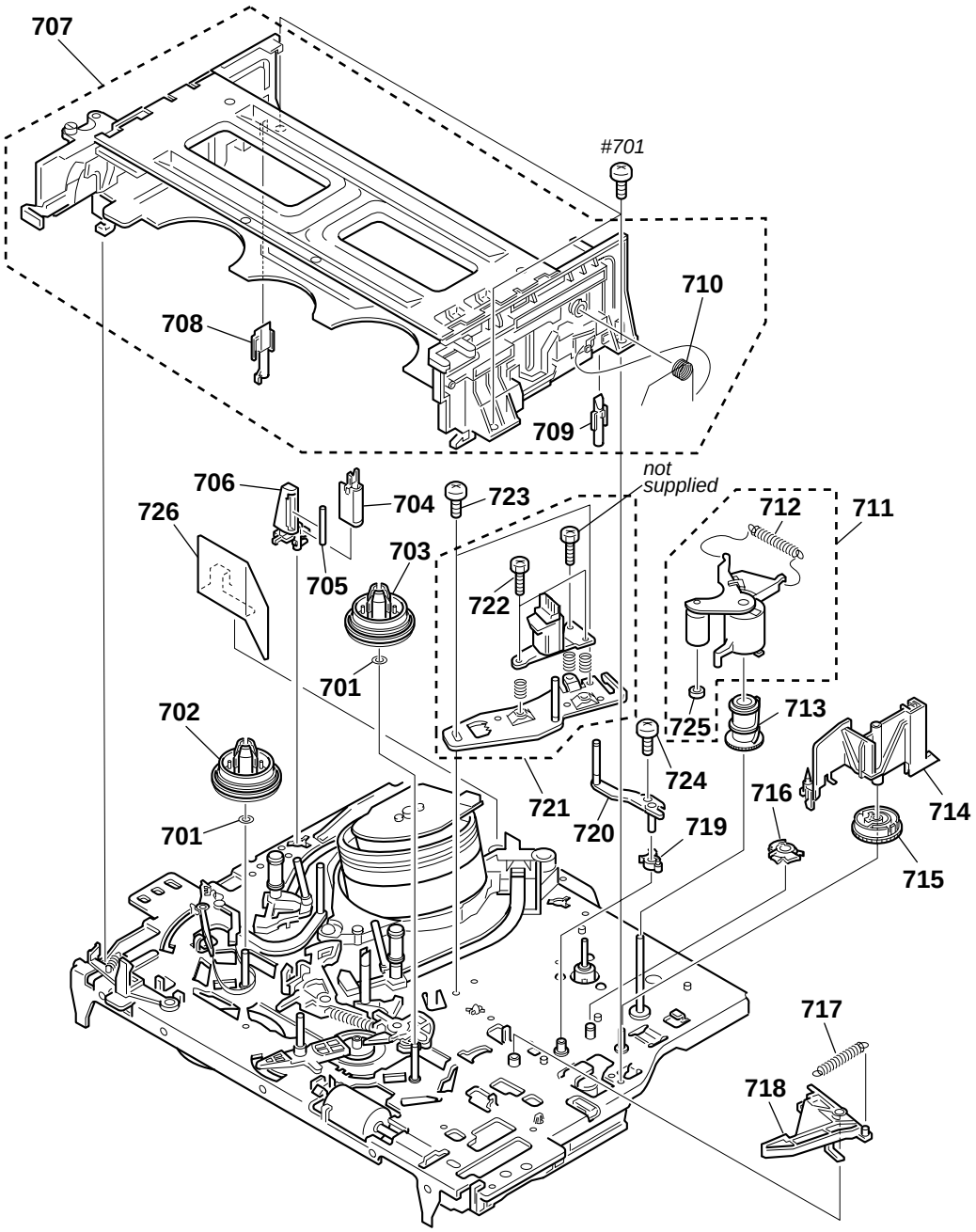
7-1-2. CHASSIS SECTION



Ref. No.	Part No.	Description	Remarks
51	A-6713-557-A	MA-372A COMPLETE PC BOARD (SE100K,SX100K)	
51	A-6713-558-A	MA-372B COMPLETE PC BOARD (SE450K)	
51	A-6713-559-A	MA-372C COMPLETE PC BOARD (SE400K)	
51	A-6713-560-A	MA-372D COMPLETE PC BOARD (SE100A1/A2)	
51	A-6713-561-A	MA-372E COMPLETE PC BOARD (SE200G)	
51	A-6713-562-A	MA-372F COMPLETE PC BOARD (SE200I)	
51	A-6713-563-A	MA-372G COMPLETE PC BOARD (SE200V1/V2)	
51	A-6713-564-A	MA-372H COMPLETE PC BOARD (SE250D,SX250D)	
51	A-6713-565-A	MA-372I COMPLETE PC BOARD (SE250P)	
51	A-6713-566-A	MA-372J COMPLETE PC BOARD (SE250B)	
51	A-6713-567-A	MA-372K COMPLETE PC BOARD (SE300D1/D2)	
51	A-6713-568-A	MA-372L COMPLETE PC BOARD (SE300G)	
51	A-6713-569-A	MA-372M COMPLETE PC BOARD (SE450D)	
51	A-6713-570-A	MA-372N COMPLETE PC BOARD (SE450P)	
51	A-6713-571-A	MA-372O COMPLETE PC BOARD (SE450B)	
52	3-970-608-21	SUMITITE (B3), +BV	
53	1-792-019-11	CABLE, FLAT (FFM-36)	
54	1-792-018-11	CABLE, FLAT (FAC-8)	
55	3-057-836-01	PANEL, REAR (E) (SE300D1/D2)	
55	3-057-836-11	PANEL, REAR (E) (SE250B/D/P,SE450B/D/P,SX250D)	
55	3-057-836-21	PANEL, REAR (E) (SE100A1/A2)	
55	3-057-836-31	PANEL, REAR (E) (SE300G)	
55	3-057-836-41	PANEL, REAR (E) (SE100K,SE200G/I/V1/V2,SE400K,SE450K,SX100K)	
⚠56	1-468-459-11	POWER BLOCK	

Note : The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

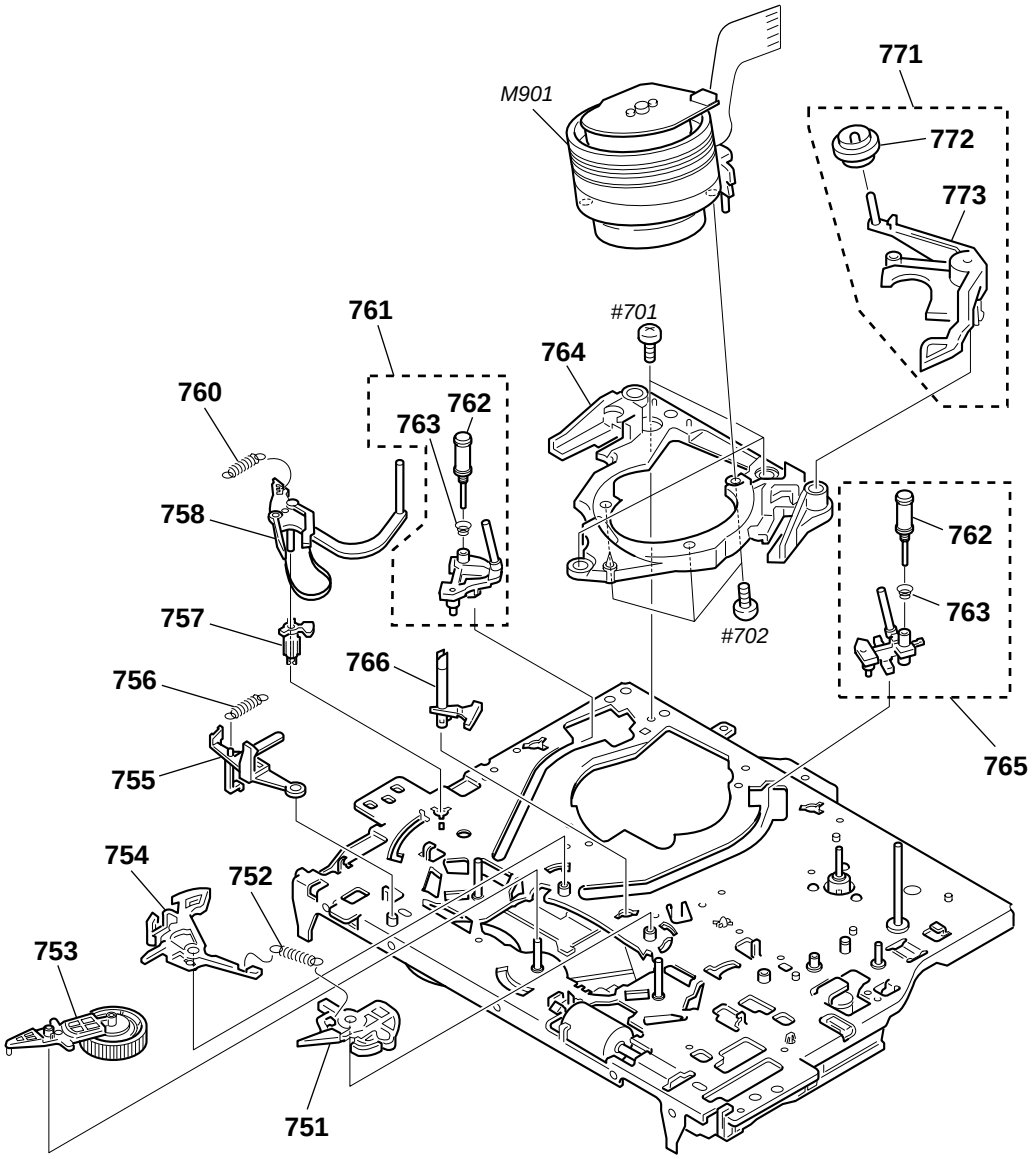
7-1-3. MECHANISM DECK SECTION-1



Ref. No.	Part No.	Description	Remarks
701	3-977-509-01	WASHER, THRUST	
702	3-977-507-01	TABLE, REEL (S)	
703	3-977-508-01	TABLE, REEL (T)	
704	1-500-144-11	HEAD, FE	
705	3-977-495-01	SHAFT TG2	
706	3-977-494-01	HOLDER, FEH	
707	A-6759-619-B	FL COMPLETE ASSY	
708	3-977-535-01	PLATE, LUMINOUS (END SENSOR)	
709	3-977-536-01	PLATE, LUMINOUS (TOP SENSOR)	
710	3-970-471-01	SPRING (DECK OPEN), TORSION	
711	A-6759-863-B	PRESS BLOCK ASSY, PINCH	
712	3-958-455-01	SPRING (PINCH), TENSION	
713	3-977-447-01	GEAR, ELEVATOR	

Ref. No.	Part No.	Description	Remarks
714	3-977-514-01	OPENER, LID	
715	3-977-441-03	GEAR, PINCH PRESSING	
716	3-977-445-02	GEAR, TG8 ARM DRIVING	
717	3-977-465-01	SPRING,EXTENSION(RVS BRAKE)	
718	X-3947-582-1	ARM ASSY, RVS BRAKE	
719	3-977-446-01	GEAR, TG8 ARM	
720	X-3947-590-1	TG8 ASSY	
721	A-6775-791-A	ACE BLOCK ASSY (ALPS) (EURO 3)	
722	3-974-556-11	+HEXA TT 2.6X9 (TAPER)	
723	3-979-508-01	SCREW +HEXA TP SW 3X8	
724	3-719-381-01	SCREW (M2X4)	
725	3-736-045-01	BEARING (NO FLANG), BALL	
726	3-058-999-01	PLATE, DRUM COVER	

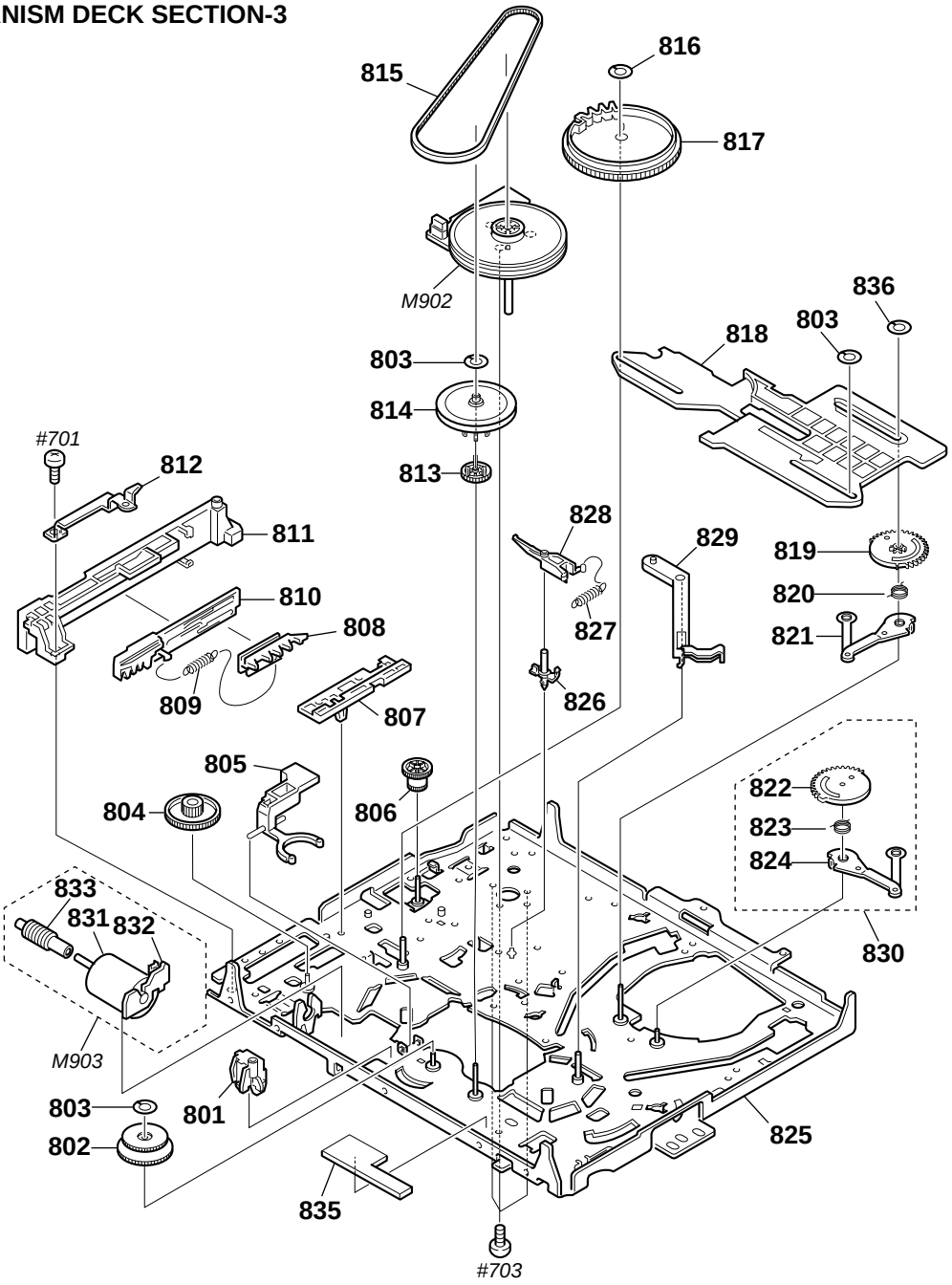
7-1-4. MECHANISM DECK SECTION-2



Ref. No.	Part No.	Description	Remarks
751	X-3947-581-4	BRAKE ASSY,MAIN(T)	
752	3-977-462-01	SPRING,EXTENTION. (MAIN BRAKE)	
753	X-3947-573-1	ARM ASSY, PENDULUM	
754	X-3947-580-5	BRAKE ASSY, MAIN(S)	
755	3-977-513-02	LEVER, REC. PROOF	
756	3-976-767-01	SPRING, TENS. (REC. PROOF)	
757	3-977-487-01	BOSS, TG1 FULCRUM	
758	X-3950-427-1	TG1 ASSY (SD)	
760	3-977-488-01	SPRING (POWER TENSION)	
761	A-6750-324-A	SHUTTLE (S) BLOCK ASSY (VW32)	
762	X-3944-378-1	ROLLER ASSY, GUIDE	
763	3-965-178-01	SPRING	

Ref. No.	Part No.	Description	Remarks
764	3-969-632-04	BASE, DRUM	
765	A-6750-328-E	SHUTTLE (T) BLOCK ASSY (VW32)	
766	3-977-501-01	PLATE, LUMINOUS	
771	A-6746-074-G	ROLLER BLOCK ASSY, HC	
772	X-3947-255-1	ROLLER ASSY, HC	
773	3-975-724-07	ARM, HC	
M901	1-774-359-11	DRUM ASSY DZH-78E-R (SE100V1/V2/K,SE200V1/V2,SE250B,SX100K)	
M901	1-774-361-11	DRUM ASSY DZH-92D-R (SE200G/I,SE250D/P,SE300D1/D2/G,SX250D)	
M901	1-774-362-11	DRUM ASSY DZH-93D-R (SE400K,SE450B/D/K/P)	

7-1-5. MECHANISM DECK SECTION-3



Ref. No.	Part No.	Description	Remarks
801	3-977-437-01	RETAINER,CAM MOTOR	
802	X-3947-584-1	ASSY, REEL DIRECT	
803	3-977-443-01	WASHER, STOPPER	
804	3-977-438-01	WORM - WHEEL	
805	3-977-506-01	ARM, LIMITTER SELECTION	
806	3-977-444-01	GEAR, PINCH TRANSMISSION	
807	3-977-515-01	GUIDE, FL SLIDER	
808	3-977-517-01	PLATE, SLIDE, FL	
809	3-977-519-01	SPRING, TENS. (LIMIT, FL)	
810	3-977-518-02	PLATE, LIMITTER, FL	
811	3-977-516-01	HOLDER, FL SLIDER	
812	3-977-877-01	PLATE, RETAINER	
813	3-977-504-01	GEAR, CLUTCH	
814	X-3947-585-1	GEAR ASSY, PULLEY	
815	3-977-510-01	BELT, RUBBER	
816	3-056-952-11	WASHER, STOPPER	
817	3-977-439-01	GEAR, CAM	
818	3-977-442-03	SLIDER	
819	3-977-455-01	GEAR, LOADING(T)	

Ref. No.	Part No.	Description	Remarks
820	3-977-456-03	SPRING, TORSION (LOAD T)	
821	X-3947-579-1	LEVER ASSY, LOADING(T)	
822	3-977-451-01	GEAR, LOADING(S)	
823	3-977-452-01	SPRING, TORSION (LOAD S)	
824	X-3947-578-1	LEVER ASSY, LOADING(S)	
825	X-3947-576-2	CHASSIS ASSY, MECHANICAL	
826	3-977-468-01	SHAFT, CAPSTAN BRAKE	
827	3-977-467-02	SPRING, CAP BRAKE	
828	X-3947-583-1	BRAKE ASSY, CAPSTAN	
829	3-977-489-01	ARM, TG1 DRIVING	
830	A-6759-616-A	GEAR BLOCK ASSY, LOADING(S)	
831	1-541-309-11	MOTOR, L (RF-370C) (LOADING)	
832	1-766-723-21	CONNECTOR, BOARD TO BOARD 3P	
833	3-977-436-01	WORM	
835	3-989-917-01	SPACER (REC PROOF)	
836	3-056-824-01	WASHER, STOPPER	
M902	1-698-971-11	MOTOR, DC (CAPSTAN)	
M903	X-3947-577-1	MOTOR ASSY, CAM (LOADING)	

7-2. ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- CAPACITORS:
  uF: µF
- RESISTORS
  All resistors are in ohms.
  METAL: metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F: nonflammable
- COILS
  uH: µH
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA...: µA... , uPA... , µPA... ,
  uPB... , µPB... , uPC... , µPC... ,
  uPD..., µPD...

When indicating parts by reference number, please include the board name.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Ref. No.	Part No.	Description			Remarks
	A-6794-737-A	JK-179A BOARD, COMPLETE (SE300)			
		**********			
		< CAPACITOR >			
C481	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C493	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
		< DIODE >			
D481	8-719-067-40	DIODE STZ6.8N-T146			
D491	8-719-067-40	DIODE STZ6.8N-T146			
D493	8-719-070-59	DIODE PDZ6.8B-115			
		< JACK >			
J481	1-695-451-11	JACK, PIN 2P (LINE-2 IN)			
		< RESISTOR >			
R480	1-216-022-00	METAL CHIP	75	5%	1/10W
R491	1-216-041-00	METAL CHIP	470	5%	1/10W
		< SWITCH >			
S481	1-771-410-21	SWITCH, TACT (EJECT)			
S482	1-771-410-21	SWITCH, TACT (POWER)			
	A-6794-738-A	KK-22A BOARD, COMPLETE (SE300,SE450B/D/P)			
		**********			
S410	1-418-156-11	ENCODER, ROTARYRY (DIAL TIMER)			
	A-6713-557-A	MA-372A COMPLETE BOARD, COMPLETE (SE100K,SX100K)			
		**********			
	A-6713-558-A	MA-372B COMPLETE BOARD, COMPLETE (SE450K)			
		**********			
	A-6713-559-A	MA-372C COMPLETE BOARD, COMPLETE (SE400K)			
		**********			
	A-6713-560-A	MA-372D COMPLETE BOARD, COMPLETE (SE100A1/A2)			
		**********			
	A-6713-561-A	MA-372E COMPLETE BOARD, COMPLETE (SE200G)			
		**********			
	A-6713-562-A	MA-372F COMPLETE BOARD, COMPLETE (SE200I)			
		**********			

Ref. No.	Part No.	Description			Remarks
	A-6713-563-A	MA-372G COMPLETE BOARD, COMPLETE (SE200V1/V2)			
		**********			
	A-6713-564-A	MA-372H COMPLETE BOARD, COMPLETE (SE250D,SX250D)			
		**********			
	A-6713-565-A	MA-372I COMPLETE BOARD, COMPLETE (SE250P)			
		**********			
	A-6713-566-A	MA-372J COMPLETE BOARD, COMPLETE (SE250B)			
		**********			
	A-6713-567-A	MA-372K COMPLETE BOARD, COMPLETE (SE300D1/D2)			
		**********			
	A-6713-568-A	MA-372L COMPLETE BOARD, COMPLETE (SE300G)			
		**********			
	A-6713-569-A	MA-372M COMPLETE BOARD, COMPLETE (SE450D)			
		**********			
	A-6713-570-A	MA-372N COMPLETE BOARD, COMPLETE (SE450P)			
		**********			
	A-6713-571-A	MA-372O COMPLETE BOARD, COMPLETE (SE450B)			
		**********			
	3-057-854-01	BASE, FL			
	3-058-480-01	HOLDER, FLO			
*	3-960-273-01	SPACER, TOP END			
*	3-960-274-01	SPACER, LED			
		< CAPACITOR >			
C100	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V (SE100A1/A2,SE200,SE250,SE300, SE400K,SE450,SX100K,SX250D)
C101	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V (SE100A1/A2,SE200,SE250,SE300, SE400K,SE450,SX100K,SX250D)
C102	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V (SE100A1/A2,SE200,SE250,SE300, SE400K,SE450,SX100K,SX250D)
C103	1-128-057-11	ELECT	330uF	20.00%	6.3V (SE100A1/A2,SE200,SE250,SE300, SE400K,SE450,SX100K,SX250D)
C105	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V (SE100A1/A2,SE200,SE250,SE300, SE400K,SE450,SX100K,SX250D)

Ref. No.	Part No.	Description	Remarks
C107	1-124-589-11	ELECT 47uF 20% 16V	(SE100A1/A2,SE200,SE250,SE300, SE400K,SE450,SX100K,SX250D)
C108	1-127-573-91	CERAMIC CHIP 1uF 10% 16V	(SE100A1/A2,SE200,SE250,SE300, SE400K,SE450,SX100K,SX250D)
C113	1-163-021-91	CERAMIC CHIP 0.01uF 10.00% 50V	(SE100A1/A2,SE200,SE250,SE300, SE400K,SE450,SX100K,SX250D)
C114	1-163-021-91	CERAMIC CHIP 0.01uF 10.00% 50V	(SE100A1/A2,SE200,SE250,SE300, SE400K,SE450,SX100K,SX250D)
C115	1-163-038-91	CERAMIC CHIP 0.1uF 25V	(SE100A1/A2,SE200,SE250,SE300, SE400K,SE450,SX100K,SX250D)
C120	1-163-021-91	CERAMIC CHIP 0.01uF 10.00% 50V	(SE100A1/A2,SE200,SE250,SE300, SE400K,SE450,SX100K,SX250D)
C121	1-163-021-91	CERAMIC CHIP 0.01uF 10.00% 50V	(SE100A1/A2,SE200,SE250,SE300, SE400K,SE450,SX100K,SX250D)
C122	1-104-664-11	ELECT 47uF 20.00% 16V	(SE100A1/A2,SE200,SE250,SE300, SE400K,SE450,SX100K,SX250D)
C123	1-163-021-91	CERAMIC CHIP 0.01uF 10.00% 50V	(SE100A1/A2,SE200,SE250,SE300, SE400K,SE450,SX100K,SX250D)
C131	1-124-589-11	ELECT 47uF 20% 16V	(SE100A1/A2,SE200,SE250,SE300, SE400K,SE450,SX100K,SX250D)
C133	1-163-021-91	CERAMIC CHIP 0.01uF 10.00% 50V	(SE100A1/A2,SE200,SE250,SE300, SE400K,SE450,SX100K,SX250D)
C134	1-163-021-91	CERAMIC CHIP 0.01uF 10.00% 50V	(SE100A1/A2,SE200,SE250,SE300, SE400K,SE450,SX100K,SX250D)
C140	1-126-933-11	ELECT 100uF 20.00% 16V	(SE100A1/A2,SE200,SE250,SE300, SE400K,SE450,SX100K,SX250D)
C141	1-163-021-91	CERAMIC CHIP 0.01uF 10.00% 50V	(SE100A1/A2,SE200,SE250,SE300, SE400K,SE450,SX100K,SX250D)
C142	1-163-037-11	CERAMIC CHIP 0.022uF 10% 25V	(SE100A1/A2,SE200,SE250,SE300, SE400K,SE450,SX100K,SX250D)
C143	1-126-965-11	ELECT 22uF 20.00% 50V	(SE100A1/A2,SE200,SE250,SE300, SE400K,SE450,SX100K,SX250D)
C144	1-126-965-11	ELECT 22uF 20.00% 50V	(SE100A1/A2,SE200,SE250,SE300, SE400K,SE450,SX100K,SX250D)
C145	1-126-933-11	ELECT 100uF 20.00% 16V	(SE100A1/A2,SE200,SE250,SE300, SE400K,SE450,SX100K,SX250D)
C146	1-164-161-11	CERAMIC CHIP 0.0022uF 10% 100V	(SE100A1/A2,SE200,SE250,SE300, SE400K,SE450,SX100K,SX250D)
C148	1-163-021-91	CERAMIC CHIP 0.01uF 10.00% 50V	(SE100A1/A2,SE200,SE250,SE300, SE400K,SE450,SX100K,SX250D)
C149	1-126-934-11	ELECT 220uF 20.00% 16V	(SE100A1/A2,SE200,SE250,SE300, SE400K,SE450,SX100K,SX250D)
C150	1-126-963-11	ELECT 4.7uF 20.00% 50V	
C160	1-163-021-91	CERAMIC CHIP 0.01uF 10.00% 50V	
C161	1-163-021-91	CERAMIC CHIP 0.01uF 10.00% 50V	
C162	1-104-905-11	CAPACITOR 0.22F 5.5V	
C163	1-163-021-91	CERAMIC CHIP 0.01uF 10.00% 50V	
C164	1-126-933-11	ELECT 100uF 20.00% 16V	
C165	1-163-021-91	CERAMIC CHIP 0.01uF 10.00% 50V	
C166	1-163-021-91	CERAMIC CHIP 0.01uF 10.00% 50V	
C167	1-163-809-11	CERAMIC CHIP 0.047uF 10% 25V	
C168	1-163-235-11	CERAMIC CHIP 22PF 5.00% 50V	
C169	1-163-235-11	CERAMIC CHIP 22PF 5.00% 50V	
C170	1-164-004-11	CERAMIC CHIP 0.1uF 10% 25V	
C171	1-163-231-11	CERAMIC CHIP 15PF 5.00% 50V	
C172	1-163-231-11	CERAMIC CHIP 15PF 5.00% 50V	
C173	1-163-007-11	CERAMIC CHIP 680PF 10% 50V	
C200	1-163-021-91	CERAMIC CHIP 0.01uF 10.00% 50V	
C201	1-126-960-11	ELECT 1uF 20.00% 50V	
C202	1-163-021-91	CERAMIC CHIP 0.01uF 10.00% 50V	
C203	1-163-809-11	CERAMIC CHIP 0.047uF 10% 25V	
C204	1-163-021-91	CERAMIC CHIP 0.01uF 10.00% 50V	
C205	1-163-241-11	CERAMIC CHIP 39PF 5% 50V	(SE100,SE200,SE250,SE300,SX100K,SX250D)
C205	1-163-239-11	CERAMIC CHIP 33PF 5.00% 50V	(SE400K,SE450)
C206	1-163-809-11	CERAMIC CHIP 0.047uF 10% 25V	
C207	1-163-237-11	CERAMIC CHIP 27PF 5.00% 50V	
C208	1-126-960-11	ELECT 1uF 20.00% 50V	
C209	1-163-257-11	CERAMIC CHIP 180PF 5.00% 50V	
C210	1-163-237-11	CERAMIC CHIP 27PF 5.00% 50V	
C211	1-109-982-11	CERAMIC CHIP 1uF 10.00% 10V	
C212	1-163-809-11	CERAMIC CHIP 0.047uF 10% 25V	
C213	1-109-982-11	CERAMIC CHIP 1uF 10.00% 10V	
C214	1-164-004-11	CERAMIC CHIP 0.1uF 10% 25V	
C215	1-163-021-91	CERAMIC CHIP 0.01uF 10.00% 50V	
C216	1-163-037-11	CERAMIC CHIP 0.022uF 10% 25V	
C217	1-163-021-91	CERAMIC CHIP 0.01uF 10.00% 50V	
C218	1-163-021-91	CERAMIC CHIP 0.01uF 10.00% 50V	
C219	1-163-038-91	CERAMIC CHIP 0.1uF 25V	
C220	1-104-664-11	ELECT 47uF 20.00% 16V	
C221	1-164-004-11	CERAMIC CHIP 0.1uF 10% 25V	(SE100,SE200V1/V2,SE250B,SE400K,SE450,SX100K)
C221	1-109-982-11	CERAMIC CHIP 1uF 10.00% 10V	(SE200G/I,SE250D/P,SE300,SX250D)
C222	1-109-982-11	CERAMIC CHIP 1uF 10.00% 10V	
C223	1-163-038-91	CERAMIC CHIP 0.1uF 25V	
C224	1-163-021-91	CERAMIC CHIP 0.01uF 10.00% 50V	
C225	1-124-589-11	ELECT 47uF 20% 16V	
C226	1-163-021-91	CERAMIC CHIP 0.01uF 10.00% 50V	
C227	1-124-589-11	ELECT 47uF 20% 16V	
C228	1-163-131-00	CERAMIC CHIP 390PF 5% 50V	
C229	1-164-004-11	CERAMIC CHIP 0.1uF 10% 25V	
C230	1-163-038-91	CERAMIC CHIP 0.1uF 25V	
C231	1-109-982-11	CERAMIC CHIP 1uF 10.00% 10V	
C232	1-109-982-11	CERAMIC CHIP 1uF 10.00% 10V	
C233	1-164-004-11	CERAMIC CHIP 0.1uF 10% 25V	
C234	1-163-021-91	CERAMIC CHIP 0.01uF 10.00% 50V	
C235	1-109-982-11	CERAMIC CHIP 1uF 10.00% 10V	
C236	1-163-243-11	CERAMIC CHIP 47PF 5.00% 50V	
C237	1-164-004-11	CERAMIC CHIP 0.1uF 10% 25V	
C238	1-124-261-00	ELECT 10uF 20% 50V	
C239	1-163-243-11	CERAMIC CHIP 47PF 5.00% 50V	(SE300)
C240	1-163-243-11	CERAMIC CHIP 47PF 5.00% 50V	(SE250,SE300,SE450B/D/P,SX250D)
C241	1-164-004-11	CERAMIC CHIP 0.1uF 10% 25V	(SE300)

MA-372

Ref. No.	Part No.	Description			Remarks
C242	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
			(SE250,SE300,SE450B/D/P,SX250D)		
C243	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C244	1-163-021-91	CERAMIC CHIP	0.01uF	10.00%	50V
C245	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C246	1-163-021-91	CERAMIC CHIP	0.01uF	10.00%	50V
C247	1-163-021-91	CERAMIC CHIP	0.01uF	10.00%	50V
C248	1-124-589-11	ELECT	47uF	20%	16V
C249	1-126-157-11	ELECT	10uF	20%	16V
C250	1-124-589-11	ELECT	47uF	20%	16V
C251	1-126-965-11	ELECT	22uF	20.00%	50V
C252	1-109-982-11	CERAMIC CHIP	1uF	10.00%	10V
C253	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
					(SE250B,SE450B)
C255	1-163-021-91	CERAMIC CHIP	0.01uF	10.00%	50V
C271	1-163-021-91	CERAMIC CHIP	0.01uF	10.00%	50V
					(SE400K,SE450)
C272	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
					(SE400K,SE450)
C275	1-163-021-91	CERAMIC CHIP	0.01uF	10.00%	50V
C276	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C278	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C279	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C280	1-124-584-00	ELECT	100uF	20%	10V
C281	1-163-021-91	CERAMIC CHIP	0.01uF	10.00%	50V
C282	1-163-021-91	CERAMIC CHIP	0.01uF	10.00%	50V
C283	1-163-021-91	CERAMIC CHIP	0.01uF	10.00%	50V
C284	1-164-489-11	CERAMIC CHIP	0.22uF	10.00%	16V
C285	1-163-021-91	CERAMIC CHIP	0.01uF	10.00%	50V
C288	1-163-251-11	CERAMIC CHIP	100PF	5.00%	50V
C289	1-163-233-11	CERAMIC CHIP	18PF	5.00%	50V
C350	1-164-489-11	CERAMIC CHIP	0.22uF	10.00%	16V
C351	1-104-664-11	ELECT	47uF	20.00%	16V
C352	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C353	1-164-489-11	CERAMIC CHIP	0.22uF	10.00%	16V
					(SE300)
C354	1-126-964-11	ELECT	10uF	20.00%	50V
C355	1-164-489-11	CERAMIC CHIP	0.22uF	10.00%	16V
C356	1-126-966-11	ELECT	33uF	20.00%	16V
C357	1-126-963-11	ELECT	4.7uF	20.00%	50V
C358	1-109-982-11	CERAMIC CHIP	1uF	10.00%	10V
C359	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V
C360	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V
C362	1-104-664-11	ELECT	47uF	20.00%	16V
C363	1-126-963-11	ELECT	4.7uF	20.00%	50V
C364	1-126-964-11	ELECT	10uF	20.00%	50V
C365	1-163-021-91	CERAMIC CHIP	0.01uF	10.00%	50V
C366	1-126-960-11	ELECT	1uF	20.00%	50V
C367	1-163-021-91	CERAMIC CHIP	0.01uF	10.00%	50V
C380	1-137-374-11	MYLAR	0.047uF	5.00%	50V
C381	1-163-021-91	CERAMIC CHIP	0.01uF	10.00%	50V
C382	1-163-021-91	CERAMIC CHIP	0.01uF	10.00%	50V
C383	1-104-664-11	ELECT	47uF	20.00%	16V
C420	1-124-589-11	ELECT	47uF	20%	16V
C421	1-163-235-11	CERAMIC CHIP	22PF	5.00%	50V
C422	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C423	1-163-021-91	CERAMIC CHIP	0.01uF	10.00%	50V
C424	1-126-157-11	ELECT	10uF	20%	16V
C427	1-104-664-11	ELECT	47uF	20.00%	16V
C500	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V

Ref. No.	Part No.	Description			Remarks
C502	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C510	1-163-021-91	CERAMIC CHIP	0.01uF	10.00%	50V
C511	1-104-664-11	ELECT	47uF	20.00%	16V
C512	1-104-664-11	ELECT	47uF	20.00%	16V
C513	1-126-935-11	ELECT	470uF	20.00%	6.3V
C570	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C571	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C572	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C580	1-124-261-00	ELECT	10uF	20%	50V
					(SE250,SE300,SE450B/D/P,SX250D)
C581	1-126-964-11	ELECT	10uF	20.00%	50V
					(SE250,SE300,SE450B/D/P,SX250D)
C582	1-126-964-11	ELECT	10uF	20.00%	50V
					(SE250,SE300D1/D2,SE450B/D/P,SX250D)
C583	1-126-964-11	ELECT	10uF	20.00%	50V
					(SE250,SE300,SE450B/D/P,SX250D)
C584	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
					(SE250,SE300,SE450B/D/P,SX250D)
C585	1-126-964-11	ELECT	10uF	20.00%	50V
					(SE250,SE300,SE450B/D/P,SX250D)
C586	1-126-964-11	ELECT	10uF	20.00%	50V
					(SE250,SE300,SE450B/D/P,SX250D)
C587	1-126-964-11	ELECT	10uF	20.00%	50V
					(SE250,SE300,SE450B/D/P,SX250D)
C588	1-126-964-11	ELECT	10uF	20.00%	50V
					(SE250,SE300D1/D2,SE450B/D/P,SX250D)
C601	1-163-021-91	CERAMIC CHIP	0.01uF	10.00%	50V
C603	1-128-131-11	ELECT	22uF	20.00%	50V
C604	1-104-664-11	ELECT	47uF	20.00%	16V
C605	1-126-964-11	ELECT	10uF	20.00%	50V
C607	1-163-021-91	CERAMIC CHIP	0.01uF	10.00%	50V
C611	1-104-664-11	ELECT	47uF	20.00%	16V
C612	1-163-021-91	CERAMIC CHIP	0.01uF	10.00%	50V
C613	1-126-933-11	ELECT	100uF	20.00%	16V
C615	1-126-965-11	ELECT	22uF	20.00%	50V
C620	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C660	1-163-233-11	CERAMIC CHIP	18PF	5.00%	50V
C661	1-163-233-11	CERAMIC CHIP	18PF	5.00%	50V
C662	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C663	1-163-021-91	CERAMIC CHIP	0.01uF	10.00%	50V
C664	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C665	1-163-245-11	CERAMIC CHIP	56PF	5.00%	50V
					(SE100K,SE250B,SE400K,SE450B/K,SX100K)
C666	1-163-135-00	CERAMIC CHIP	560PF	5%	50V
C667	1-163-021-91	CERAMIC CHIP	0.01uF	10.00%	50V
C668	1-124-584-00	ELECT	100uF	20%	10V
C669	1-163-016-00	CERAMIC CHIP	0.0039uF	10%	50V
C670	1-109-982-11	CERAMIC CHIP	1uF	10.00%	10V
C671	1-163-235-11	CERAMIC CHIP	22PF	5.00%	50V
C672	1-163-021-91	CERAMIC CHIP	0.01uF	10.00%	50V
C701	1-126-964-11	ELECT	10uF	20.00%	50V
C704	1-126-964-11	ELECT	10uF	20.00%	50V
C705	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C708	1-104-664-11	ELECT	47uF	20.00%	16V
C709	1-163-021-91	CERAMIC CHIP	0.01uF	10.00%	50V
C710	1-126-965-11	ELECT	22uF	20.00%	50V
					(SE100A1/A2,SE200,SE250,SE300,SE450B/D/P,SX250D)
C721	1-128-131-11	ELECT	22uF	20.00%	50V
C752	1-126-933-11	ELECT	100uF	20.00%	16V
C753	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C754	1-126-935-11	ELECT	470uF	20.00%	6.3V

Ref. No.	Part No.	Description	Remarks
C801	1-163-021-91	CERAMIC CHIP 0.01uF 10.00% 50V	(SE200,SE250,SE300,SE450,SX250D)
C850	1-163-038-91	CERAMIC CHIP 0.1uF 25V	(SE200,SE250B/D,SE300,SE450B/D/K,SX250D)
C851	1-124-261-00	ELECT 10uF 20% 50V	(SE200,SE250B/D,SE300,SE450B/D/K,SX250D)
C852	1-164-161-11	CERAMIC CHIP 0.0022uF 10% 100V	(SE200,SE250B/D,SE300,SE450B/D/K,SX250D)
C853	1-163-989-11	CERAMIC CHIP 0.033uF 10% 25V	(SE200,SE250B/D,SE300,SE450B/D/K,SX250D)
C855	1-164-489-11	CERAMIC CHIP 0.22uF 10.00% 16V	(SE200,SE250B/D,SE300,SE450B/D/K,SX250D)
C856	1-163-038-91	CERAMIC CHIP 0.1uF 25V	(SE200,SE250B/D,SE300,SE450B/D/K,SX250D)
C970	1-163-259-91	CERAMIC CHIP 220PF 5.00% 50V	(SE250B,SE450B)
C971	1-124-257-00	ELECT 2.2uF 20% 50V	(SE250B,SE450B)
C972	1-163-017-00	CERAMIC CHIP 0.0047uF 5% 50V	(SE250B,SE450B)
C973	1-163-021-91	CERAMIC CHIP 0.01uF 10.00% 50V	(SE250B,SE450B)
C974	1-109-982-11	CERAMIC CHIP 1uF 10.00% 10V	(SE250B,SE450B)
C975	1-163-037-11	CERAMIC CHIP 0.022uF 10% 25V	(SE250B,SE450B)
C976	1-163-259-91	CERAMIC CHIP 220PF 5.00% 50V	(SE250B,SE450B)
C977	1-163-021-91	CERAMIC CHIP 0.01uF 10.00% 50V	(SE250B,SE450B)
C978	1-163-017-00	CERAMIC CHIP 0.0047uF 5% 50V	(SE250B,SE450B)
C979	1-163-255-11	CERAMIC CHIP 150PF 5.00% 50V	(SE250B,SE450B)
C980	1-164-004-11	CERAMIC CHIP 0.1uF 10% 25V	(SE250B,SE450B)
C981	1-163-021-91	CERAMIC CHIP 0.01uF 10.00% 50V	(SE250B,SE450B)
C982	1-163-007-11	CERAMIC CHIP 680PF 10% 50V	(SE250B,SE450B)
C983	1-163-009-11	CERAMIC CHIP 0.001uF 10% 50V	(SE250B,SE450B)
C984	1-163-021-91	CERAMIC CHIP 0.01uF 10.00% 50V	(SE250B,SE450B)
C985	1-163-251-11	CERAMIC CHIP 100PF 5.00% 50V	(SE250B,SE450B)
C986	1-126-157-11	ELECT 10uF 20% 16V	(SE250B,SE450B)
C987	1-107-823-11	CERAMIC CHIP 0.47uF 10.00% 16V	(SE250B,SE450B)
C988	1-163-251-11	CERAMIC CHIP 100PF 5.00% 50V	(SE250B,SE450B)
C991	1-164-004-11	CERAMIC CHIP 0.1uF 10% 25V	(SE250B,SE450B)
C992	1-163-021-91	CERAMIC CHIP 0.01uF 10.00% 50V	(SE250B,SE450B)
C993	1-163-021-91	CERAMIC CHIP 0.01uF 10.00% 50V	(SE250B,SE450B)
C994	1-163-021-91	CERAMIC CHIP 0.01uF 10.00% 50V	(SE250B,SE450B)
C995	1-126-157-11	ELECT 10uF 20% 16V	(SE250B,SE450B)
C996	1-163-227-11	CERAMIC CHIP 10PF 0.50PF 50V	(SE250B,SE450B)
		< CONNECTOR >	
CN101	1-695-328-11	HOUSING, CONNECTOR 5P	
CN102	1-779-723-11	CONNECTOR, BOARD TO BOARD 9P	
* CN104	1-766-716-11	CONNECTOR, BOARD TO BOARD 3P	
CN161	1-506-469-11	PIN, CONNECTOR 4P	
CN261	1-793-919-11	CONNECTOR, FFC/FPC 6P	
* CN262	1-560-893-00	PIN, CONNECTOR 5P	
CN350	1-784-486-11	CONNECTOR, FFC/FPC 7P	
CN351	1-506-468-11	PIN, CONNECTOR 3P	
CN460	1-506-469-11	PIN, CONNECTOR 4P (SE300,SE450B/D/P)	
CN500	1-793-918-11	CONNECTOR, SQUARE TYPE 21P	
* CN501	1-568-955-11	PIN, CONNECTOR 6P (SE300)	
CN570	1-793-918-11	CONNECTOR, SQUARE TYPE 21P	(SE250,SE300,SE450B/D/P,SX250D)
CN570	1-794-172-11	CONNECTOR, SQUARE TYPE 21P	(SE250,SE300,SE450B/D/P,SX250D)
CN600	1-569-340-11	CONNECTOR, BOARD TO BOARD 11P	
		< DIODE >	
D100	8-719-048-26	DIODE GL528V1	
D110	8-719-200-82	DIODE MPG06D-6052PKG3	
D140	8-719-988-61	DIODE 1SS355TE-17	
D420	8-719-045-62	DIODE SLR-342VCT31	(SE300)
D421	8-719-988-61	DIODE 1SS355TE-17	(SE300)
D424	8-719-067-40	DIODE STZ6.8N-T146	
D500	8-719-067-40	DIODE STZ6.8N-T146	
D504	8-719-067-40	DIODE STZ6.8N-T146	
D505	8-719-070-59	DIODE PDZ6.8B-115	
D508	8-719-070-59	DIODE PDZ6.8B-115	
D511	8-719-070-59	DIODE PDZ6.8B-115	
D512	8-719-977-40	DIODE UDZ-TE-17-13B	
D513	8-719-067-40	DIODE STZ6.8N-T146	
D514	8-719-977-40	DIODE UDZ-TE-17-13B	
D515	8-719-067-40	DIODE STZ6.8N-T146	
D540	8-719-067-40	DIODE STZ6.8N-T146	(SE250,SE300,SE450B/D/P,SX250D)
D542	8-719-067-40	DIODE STZ6.8N-T146	(SE250,SE300,SE450B/D/P,SX250D)
D544	8-719-070-59	DIODE PDZ6.8B-115	(SE250,SE300D1/D2,SE450B/D/P,SX250D)
D570	8-719-070-59	DIODE PDZ6.8B-115	(SE250,SE300,SE450B/D/P,SX250D)
D571	8-719-067-40	DIODE STZ6.8N-T146	(SE250,SE300,SE450B/D/P,SX250D)
D575	8-719-067-40	DIODE STZ6.8N-T146	(SE250,SE300D1/D2,SE450B/D/P,SX250D)
D576	8-719-977-40	DIODE UDZ-TE-17-13B	(SE250,SE300,SE450B/D/P,SX250D)
D590	8-719-988-61	DIODE 1SS355TE-17	
D591	8-719-988-61	DIODE 1SS355TE-17	
D600	8-719-988-61	DIODE 1SS355TE-17	
D601	8-719-988-61	DIODE 1SS355TE-17	
D602	8-719-070-56	DIODE PDZ5.1B-115	
D603	8-719-075-84	DIODE S1G-G2P	(SE250,SE300,SE450B/D/P,SX250D)
D606	8-719-075-84	DIODE S1G-G2P	
D607	8-719-075-84	DIODE S1G-G2P	

Ref. No.	Part No.	Description	Remarks
D702	8-719-982-26	DIODE MTZJ-T-77-33	
D750	8-719-075-84	DIODE S1G-G2P	
D800	8-719-988-61	DIODE 1SS355TE-17	(SE200,SE250,SE300,SE450,SX250D)
		< TERMINAL BOARD >	
ET600	1-537-770-21	TERMINAL BOARD, GROUND	
		< FILTER >	
FL500	1-236-163-11	ENCAPSULATED COMPONENT	
FL502	1-236-163-11	ENCAPSULATED COMPONENT	
FL570	1-236-163-11	ENCAPSULATED COMPONENT	(SE250,SE300,SE450B/D/P,SX250D)
FL572	1-236-163-11	ENCAPSULATED COMPONENT	(SE250,SE300D1/D2,SE450B/D/P,SX250D)
		< IC >	
IC130	8-759-645-07	IC LB1943N	
IC160	8-759-248-87	IC MM1256XF-BE	
IC161	8-759-575-72	IC M24C08-WMN6T	
IC162	8-759-638-61	IC M37760MFH210GP	(SE100,SE400K,SX100K)
IC162	8-759-638-62	IC M37760MFH215GP	(SE200,SE250,SE300,SE450,SX250D)
IC200	8-759-638-71	IC LA71562M-MPB	
IC260	8-759-549-79	IC LA70001	(SE100,SE200,SE250,SE300,SX100K,SX250D)
IC260	8-759-564-36	IC LA70011 (SE400K,SE450)	
IC350	8-759-499-30	IC BA7755AF-E2	
IC420	8-759-547-59	IC M35500BGP	
IC460	8-749-015-48	IC RPM6940	
IC580	8-759-009-07	IC MC14053BFEL	(SE250,SE300,SE450B/D/P,SX250D)
⚠IC601	8-759-438-18	IC PQ12RD08	
IC850	8-759-484-61	IC SDA5650X-GEG	(SE200,SE250B/D,SE300,SE450B/D/K,SX250D)
IC970	8-759-438-17	IC LA7337 (SE250B,SE450B)	
		< JUMPER RESISTOR >	
JR001	1-216-296-91	SHORT 0	
JR005	1-216-296-91	SHORT 0	
JR006	1-216-296-91	SHORT 0	
JR008	1-216-296-91	SHORT 0	
JR009	1-216-296-91	SHORT 0	
JR002	1-216-296-91	SHORT 0 (SE250B,SE450B)	
JR003	1-216-296-91	SHORT 0	(SE250,SE300,SE450B/D/P,SX250D)
JR004	1-216-296-91	SHORT 0	(SE250,SE300,SE450B/D/P,SX250D)
JR007	1-216-296-91	SHORT 0 (SE250B,SE450B)	
JR010	1-216-296-91	SHORT 0	
JR011	1-216-296-91	SHORT 0	
JR012	1-216-296-91	SHORT 0	
JR013	1-216-296-91	SHORT 0	
JR016	1-216-296-91	SHORT 0	
JR014	1-216-296-91	SHORT 0 (SE250B,SE450B)	

Ref. No.	Part No.	Description	Remarks
JR015	1-216-296-91	SHORT 0 (SE250B,SE450B)	
JR017	1-216-296-91	SHORT 0 (SE250B,SE450B)	
JR018	1-216-296-91	SHORT 0	(SE250,SE300,SE450B/D/P,SX250D)
JR019	1-216-296-91	SHORT 0	(SE250,SE300,SE450B/D/P,SX250D)
JR020	1-216-296-91	SHORT 0	
JR021	1-216-296-91	SHORT 0	
JR022	1-216-296-91	SHORT 0	
JR024	1-216-296-91	SHORT 0	
JR025	1-216-296-91	SHORT 0	(SE200,SE250B/D,SE300,SE450B/D/K,SX250D)
JR026	1-216-296-91	SHORT 0	
JR027	1-216-296-91	SHORT 0	
JR028	1-216-296-91	SHORT 0	
JR029	1-216-296-91	SHORT 0	
JR023	1-216-296-91	SHORT 0 (SE250B,SE450B)	
JR030	1-216-296-91	SHORT 0	
JR031	1-216-296-91	SHORT 0	
JR032	1-216-296-91	SHORT 0	
JR034	1-216-296-91	SHORT 0	
JR036	1-216-296-91	SHORT 0	
JR038	1-216-296-91	SHORT 0	
JR039	1-216-296-91	SHORT 0	
JR033	1-216-296-91	SHORT 0	(SE250,SE300,SE450B/D/P,SX250D)
JR035	1-216-296-91	SHORT 0 (SE250B,SE450B)	
JR040	1-216-296-91	SHORT 0	
JR042	1-216-296-91	SHORT 0	
JR043	1-216-296-91	SHORT 0	
JR044	1-216-296-91	SHORT 0	
JR041	1-216-296-91	SHORT 0	(SE250,SE300,SE450B/D/P,SX250D)
JR201	1-216-295-91	SHORT 0	
JR202	1-216-295-91	SHORT 0	
JR203	1-216-295-91	SHORT 0	
JR204	1-216-295-91	SHORT 0	
JR205	1-216-295-91	SHORT 0	
JR206	1-216-295-91	SHORT 0	
JR207	1-216-295-91	SHORT 0	
JR209	1-216-295-91	SHORT 0	
JR208	1-216-295-91	SHORT 0	(SE250,SE300,SE450B/D/P,SX250D)
JR210	1-216-295-91	SHORT 0	
JR211	1-216-295-91	SHORT 0	
JR212	1-216-295-91	SHORT 0	
JR213	1-216-295-91	SHORT 0	
JR216	1-216-295-91	SHORT 0	
JR218	1-216-295-91	SHORT 0	
JR219	1-216-295-91	SHORT 0	
JR214	1-216-295-91	SHORT 0 (SE250B,SE450B)	
JR215	1-216-295-91	SHORT 0 (SE250B,SE450B)	
JR217	1-216-295-91	SHORT 0	(SE250,SE300,SE450B/D/P,SX250D)
JR220	1-216-295-91	SHORT 0	
JR221	1-216-295-91	SHORT 0	
JR222	1-216-295-91	SHORT 0	

Note : The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remarks
JR226	1-216-295-91	SHORT 0	
JR227	1-216-295-91	SHORT 0	
JR228	1-216-295-91	SHORT 0	
JR229	1-216-295-91	SHORT 0	
JR223	1-216-295-91	SHORT 0	
		(SE250,SE300,SE450B/D/P,SX250D)	
JR230	1-216-295-91	SHORT 0	
JR231	1-216-296-91	SHORT 0	
JR232	1-216-296-91	SHORT 0	
		< JUMPER RESISTOR >	
JS580	1-216-295-91	SHORT 0	
		(SE100,SE200,SE400K,SE450K,SX100K)	
JS581	1-216-295-91	SHORT 0	
		(SE100,SE200,SE400K,SE450K,SX100K)	
		< COIL >	
L140	1-414-936-21	INDUCTOR 22uH	
L160	1-414-936-21	INDUCTOR 22uH	
L161	1-414-936-21	INDUCTOR 22uH	
L200	1-414-946-21	INDUCTOR 39uH	
L201	1-414-940-21	INDUCTOR 100uH	
L202	1-414-934-21	INDUCTOR 10uH	
L203	1-414-934-21	INDUCTOR 10uH	
L204	1-414-934-21	INDUCTOR 10uH	
L205	1-414-934-21	INDUCTOR 10uH	
L206	1-414-938-21	INDUCTOR 47uH (SE250B,SE450B)	
L270	1-414-940-21	INDUCTOR 100uH	
L271	1-414-930-21	INDUCTOR 2.2uH	
L350	1-414-940-21	INDUCTOR 100uH	
L380	1-414-940-21	INDUCTOR 100uH	
L460	1-414-938-21	INDUCTOR 47uH	
L510	1-414-940-21	INDUCTOR 100uH	
L580	1-414-940-21	INDUCTOR 100uH	
		(SE250,SE300,SE450B/D/P,SX250D)	
L601	1-414-934-21	INDUCTOR 10uH	
L660	1-414-930-21	INDUCTOR 2.2uH	
L661	1-414-936-21	INDUCTOR 22uH	
		(SE100K,SE250B,SE400K,SE450B/K,SX100K)	
L662	1-414-936-21	INDUCTOR 22uH	
L663	1-414-936-21	INDUCTOR 22uH	
L701	1-414-930-21	INDUCTOR 2.2uH	
L720	1-414-939-21	INDUCTOR 68uH	
L721	1-414-936-21	INDUCTOR 22uH	
L750	1-414-930-21	INDUCTOR 2.2uH	
L970	1-414-933-21	INDUCTOR 6.8uH (SE250B,SE450B)	
L971	1-414-945-21	INDUCTOR 27uH (SE250B,SE450B)	
L972	1-414-938-21	INDUCTOR 47uH (SE250B,SE450B)	
L973	1-414-938-21	INDUCTOR 47uH (SE250B,SE450B)	
L975	1-414-934-21	INDUCTOR 10uH (SE250B,SE450B)	
		< FLUORESCENT INDICATOR >	
ND420	1-517-832-11	INDICATOR TUBE, FLUORESCENT	
		(SE100K,SE400K,SE450K,SX100K)	
ND420	1-517-833-11	INDICATOR TUBE, FLUORESCENT	
		(SE100A1/A2,SE200,SE250,SE300,SE450B/D/P,SX250D)	

Ref. No.	Part No.	Description	Remarks
		< PHOTO INTERRUPTER >	
PH100	8-749-015-86	PHOTO INTERRUPTER GP3S120S	
PH101	8-749-015-86	PHOTO INTERRUPTER GP3S120S	
		< IC LINK >	
⚠PS120	1-532-605-00	LINK, IC 0.4A	
⚠PS600	1-532-637-00	LINK, IC 1.0A	
⚠PS601	1-532-605-00	LINK, IC 0.4A	
⚠PS603	1-532-727-11	LINK, IC 0.25A	
⚠PS602	1-532-727-11	LINK, IC 0.25A	
		(SE250,SE300,SE450B/D/P,SX250D)	
		< TRANSISTOR >	
Q100	8-729-043-84	TRANSISTOR PT380F3	
Q101	8-729-043-84	TRANSISTOR PT380F3	
Q102	8-729-281-53	TRANSISTOR 2SC1815GR-TPE2	
Q103	1-801-806-11	TRANSISTOR DTC144EKA-T146	
Q104	8-729-216-22	TRANSISTOR 2PB709AR-115	
Q200	8-729-422-33	TRANSISTOR 2PD601AR-115	
Q201	8-729-422-33	TRANSISTOR 2PD601AR-115	
Q202	8-729-422-33	TRANSISTOR 2PD601AR-115	
Q203	8-729-216-22	TRANSISTOR 2PB709AR-115	
Q204	1-801-806-11	TRANSISTOR DTC144EKA-T146	
		(SE250B,SE450B)	
Q350	8-729-281-53	TRANSISTOR 2SC1815GR-TPE2	
Q380	8-729-802-91	TRANSISTOR 2SD879-AA	
Q501	8-729-027-23	TRANSISTOR DTA114EKA-T146	
Q502	1-801-806-11	TRANSISTOR DTC144EKA-T146	
Q510	8-729-216-22	TRANSISTOR 2PB709AR-115	
Q540	8-729-216-22	TRANSISTOR 2PB709AR-115	
		(SE250,SE300D1/D2,SE450B/D/P,SX250D)	
Q541	8-729-216-22	TRANSISTOR 2PB709AR-115	
		(SE250,SE300D1/D2,SE450B/D/P,SX250D)	
Q580	1-801-806-11	TRANSISTOR DTC144EKA-T146	
		(SE250,SE300,SE450B/D/P,SX250D)	
Q581	1-801-806-11	TRANSISTOR DTC144EKA-T146	
		(SE250,SE300D1/D2,SE450B/D/P,SX250D)	
Q582	1-801-806-11	TRANSISTOR DTC144EKA-T146	
		(SE250,SE300,SE450B/D/P,SX250D)	
Q583	8-729-422-33	TRANSISTOR 2PD601AR-115	
		(SE250,SE300,SE450B/D/P,SX250D)	
Q591	8-729-422-33	TRANSISTOR 2PD601AR-115	
Q600	8-729-018-99	TRANSISTOR 2SD2394-F	
⚠Q601	8-729-140-93	TRANSISTOR 2SB733-T-34	
Q602	8-729-140-96	TRANSISTOR 2SD774-T-4	
Q603	8-729-422-33	TRANSISTOR 2PD601AR-115	
Q604	8-729-119-79	TRANSISTOR 2SC2785TP-FEK	
Q605	8-729-027-23	TRANSISTOR DTA114EKA-T146	
Q606	1-801-806-11	TRANSISTOR DTC144EKA-T146	
Q607	8-729-804-41	TRANSISTOR 2SB1122-ST-TD	
		(SE250,SE300,SE450B/D/P,SX250D)	
Q608	1-801-806-11	TRANSISTOR DTC144EKA-T146	
		(SE250,SE300,SE450B/D/P,SX250D)	
Q611	8-729-422-33	TRANSISTOR 2PD601AR-115	
Q612	8-729-804-41	TRANSISTOR 2SB1122-ST-TD	
Q613	1-801-806-11	TRANSISTOR DTC144EKA-T146	
Q660	8-729-216-22	TRANSISTOR 2PB709AR-115	

Note : The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description			Remarks
Q661	8-729-216-22	TRANSISTOR	2PB709AR-115		
Q720	8-729-119-76	TRANSISTOR	2SA1309A-QRSTA		
Q721	8-729-422-33	TRANSISTOR	2PD601AR-115		
Q751	1-801-806-11	TRANSISTOR	DTC144EKA-T146		
Q752	8-729-216-22	TRANSISTOR	2PB709AR-115		
Q800	8-729-216-22	TRANSISTOR	2PB709AR-115		
			(SE200,SE250,SE300,SE450,SX250D)		
Q801	8-729-422-33	TRANSISTOR	2PD601AR-115		
			(SE200,SE250,SE300,SE450,SX250D)		
Q802	8-729-422-33	TRANSISTOR	2PD601AR-115		
			(SE200,SE250,SE300,SE450,SX250D)		
Q803	8-729-422-33	TRANSISTOR	2PD601AR-115		
			(SE200,SE250,SE300,SE450,SX250D)		
Q804	1-801-806-11	TRANSISTOR	DTC144EKA-T146		
			(SE200,SE250,SE300,SE450,SX250D)		
Q850	8-729-216-22	TRANSISTOR	2PB709AR-115		
			(SE200,SE250B/D,SE300,SE450B/D/K,SX250D)		
Q970	8-729-216-22	TRANSISTOR	2PB709AR-115		
					(SE250B,SE450B)
Q972	8-729-027-23	TRANSISTOR	DTA114EKA-T146		
					(SE250B,SE450B)
Q973	8-729-422-33	TRANSISTOR	2PD601AR-115		
					(SE250B,SE450B)
Q974	8-729-422-33	TRANSISTOR	2PD601AR-115		
					(SE250B,SE450B)
Q975	8-729-027-23	TRANSISTOR	DTA114EKA-T146		
					(SE250B,SE450B)
Q976	1-801-806-11	TRANSISTOR	DTC144EKA-T146		
					(SE250B,SE450B)
		< RESISTOR >			
R100	1-216-077-91	RES-CHIP	15K	5%	1/10W
R101	1-249-413-11	CARBON	470	5%	1/4W F
R102	1-216-077-91	RES-CHIP	15K	5%	1/10W
R103	1-216-081-00	METAL CHIP	22K	5%	1/10W
R104	1-216-049-91	RES-CHIP	1K	5%	1/10W
R105	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R106	1-249-400-11	CARBON	39	5%	1/4W F
R107	1-249-400-11	CARBON	39	5%	1/4W F
R108	1-216-081-00	METAL CHIP	22K	5%	1/10W
R110	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R111	1-216-089-91	RES-CHIP	47K	5%	1/10W
R114	1-216-089-91	RES-CHIP	47K	5%	1/10W
R115	1-216-089-91	RES-CHIP	47K	5%	1/10W
R120	1-216-089-91	RES-CHIP	47K	5%	1/10W
R121	1-216-089-91	RES-CHIP	47K	5%	1/10W
R123	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R124	1-216-041-00	METAL CHIP	470	5%	1/10W
R130	1-216-077-91	RES-CHIP	15K	5%	1/10W
R132	1-216-041-00	METAL CHIP	470	5%	1/10W
R133	1-216-089-91	RES-CHIP	47K	5%	1/10W
R142	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R143	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R160	1-216-295-91	SHORT	0		
			(SE100A1/A2,SE200V1/V2,SE250D/P,SE300D1/D2,SX250D)		
R160	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
					(SE100K,SE400K,SE450K,SX100K)
R160	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
					(SE250B,SE450B)

Ref. No.	Part No.	Description			Remarks
R160	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
					(SE450D/P)
R160	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
					(SE300G,SE200G/I)
R161	1-216-075-00	METAL CHIP	12K	5%	1/10W
					(SE300D1/D2)
R161	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
					(SE250D,SX250D)
R161	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
					(SE200I)
R161	1-216-295-91	SHORT	0		
			(SE100,SE250B,SE450P,SX100K)		
R161	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
			(SE200V1/V2,SE300G,SE450B/K)		
R161	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
			(SE200G,SE250P,SE400K,SE450D)		
R162	1-216-073-00	METAL CHIP	10K	5%	1/10W
R163	1-216-073-00	METAL CHIP	10K	5%	1/10W
R164	1-216-073-00	METAL CHIP	10K	5%	1/10W
R165	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
					(SE300,SE450B/D/P)
R166	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
					(SE300,SE450B/D/P)
R167	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R168	1-216-101-00	METAL CHIP	150K	5%	1/10W
R169	1-216-113-00	METAL CHIP	470K	5%	1/10W
R170	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R171	1-216-073-00	METAL CHIP	10K	5%	1/10W
R176	1-216-037-00	METAL CHIP	330	5%	1/10W
R177	1-216-041-00	METAL CHIP	470	5%	1/10W
R178	1-216-041-00	METAL CHIP	470	5%	1/10W
R179	1-216-041-00	METAL CHIP	470	5%	1/10W
R180	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R181	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R182	1-216-041-00	METAL CHIP	470	5%	1/10W
R183	1-216-041-00	METAL CHIP	470	5%	1/10W
R184	1-216-295-91	SHORT	0		
R185	1-216-295-91	SHORT	0		
R189	1-216-049-91	RES-CHIP	1K	5%	1/10W
R196	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R200	1-216-073-00	METAL CHIP	10K	5%	1/10W
R203	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R204	1-216-037-00	METAL CHIP	330	5%	1/10W
R205	1-216-037-00	METAL CHIP	330	5%	1/10W
R206	1-216-047-91	RES-CHIP	820	5%	1/10W
			(SE100,SE200,SE250,SE300,SX100K,SX250D)		
R206	1-216-045-00	METAL CHIP	680	5%	1/10W
					(SE400K,SE450)
R207	1-216-047-91	RES-CHIP	820	5%	1/10W
			(SE100,SE200,SE250,SE300,SX100K,SX250D)		
R207	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
					(SE400K,SE450)
R208	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R209	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R210	1-216-043-91	RES-CHIP	560	5%	1/10W
R211	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R212	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R213	1-216-041-00	METAL CHIP	470	5%	1/10W
R214	1-216-041-00	METAL CHIP	470	5%	1/10W

Ref. No.	Part No.	Description			Remarks
R215	1-216-025-91	RES-CHIP	100	5%	1/10W
R216	1-216-117-00	METAL CHIP	680K	5%	1/10W
		(SE100,SE200,SE250,SE300,SX100K,SX250D)			
R216	1-216-109-00	METAL CHIP	330K	5%	1/10W
		(SE400K,SE450)			
R217	1-216-025-91	RES-CHIP	100	5%	1/10W
		(SE250,SE300D1/D2,SE450B/D/P,SX250D)			
R218	1-216-295-91	SHORT	0		
R219	1-216-017-91	RES-CHIP	47	5%	1/10W
R220	1-216-049-91	RES-CHIP	1K	5%	1/10W
R221	1-216-017-91	RES-CHIP	47	5%	1/10W
R222	1-216-017-91	RES-CHIP	47	5%	1/10W
		(SE300)			
R223	1-216-017-91	RES-CHIP	47	5%	1/10W
		(SE250,SE300,SE450B/D/P,SX250D)			
R224	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R225	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R226	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R227	1-216-295-91	SHORT	0		
R228	1-216-295-91	SHORT	0 (SE250B,SE450B)		
R232	1-216-077-91	RES-CHIP	15K	5%	1/10W
		(SE100,SE200,SE250,SE300,SX100K,SX250D)			
R232	1-216-085-00	METAL CHIP	33K	5%	1/10W
		(SE400K,SE450)			
R233	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
		(SE250B,SE450B)			
R235	1-216-089-91	RES-CHIP	47K	5%	1/10W
R236	1-216-089-91	RES-CHIP	47K	5%	1/10W
R270	1-216-043-91	RES-CHIP	560	5%	1/10W
		(SE400K,SE450)			
R271	1-216-043-91	RES-CHIP	560	5%	1/10W
R272	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
		(SE100,SE200V1/V2,SE250B,SX100K)			
R272	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
		(SE400K,SE450)			
R272	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
		(SE200G/I,SE250D/P,SE300,SX250D)			
R273	1-216-295-91	SHORT	0		
R274	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
		(SE100,SE200,SE250,SE300,SX100K,SX250D)			
R274	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
		(SE400K,SE450)			
R276	1-216-077-91	RES-CHIP	15K	5%	1/10W
		(SE100,SE200,SE250,SE300,SX100K,SX250D)			
R276	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
		(SE400K,SE450)			
R277	1-216-081-00	METAL CHIP	22K	5%	1/10W
R278	1-216-081-00	METAL CHIP	22K	5%	1/10W
R279	1-216-081-00	METAL CHIP	22K	5%	1/10W
R280	1-216-097-91	RES-CHIP	100K	5%	1/10W
R283	1-216-295-91	SHORT	0		
R284	1-216-295-91	SHORT	0		
R286	1-216-025-91	RES-CHIP	100	5%	1/10W
R350	1-216-093-91	RES-CHIP	68K	5%	1/10W
R351	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R352	1-216-093-91	RES-CHIP	68K	5%	1/10W
		(SE300)			
R353	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
		(SE300)			
R354	1-216-129-00	METAL CHIP	2.2M	5%	1/10W
R355	1-216-093-91	RES-CHIP	68K	5%	1/10W
R356	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R357	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R358	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R359	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R362	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R363	1-216-079-00	METAL CHIP	18K	5%	1/10W
R364	1-216-035-00	METAL CHIP	270	5%	1/10W
R365	1-216-109-00	METAL CHIP	330K	5%	1/10W
R366	1-216-073-00	METAL CHIP	10K	5%	1/10W
R367	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R368	1-216-047-91	RES-CHIP	820	5%	1/10W
R370	1-216-075-00	METAL CHIP	12K	5%	1/10W
R371	1-216-079-00	METAL CHIP	18K	5%	1/10W
R380	1-216-017-91	RES-CHIP	47	5%	1/10W
R381	1-216-063-91	RES-CHIP	3.9K	5%	1/10W
R382	1-217-671-11	METAL CHIP	1	5%	1/10W
R383	1-216-031-00	METAL CHIP	180	5%	1/10W
R420	1-216-295-91	SHORT	0		
R421	1-216-295-91	SHORT	0		
R422	1-216-049-91	RES-CHIP	1K	5%	1/10W
R423	1-216-295-91	SHORT	0		
R424	1-216-295-91	SHORT	0 (SE300,SE450B/D/P)		
R425	1-216-295-91	SHORT	0 (SE300,SE450B/D/P)		
R426	1-216-041-00	METAL CHIP	470	5%	1/10W
					(SE300)
R427	1-216-017-91	RES-CHIP	47	5%	1/10W
R460	1-216-073-00	METAL CHIP	10K	5%	1/10W
R461	1-216-037-00	METAL CHIP	330	5%	1/10W
R462	1-216-049-91	RES-CHIP	1K	5%	1/10W
R463	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R464	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R465	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R466	1-216-295-91	SHORT	0		
R467	1-216-295-91	SHORT	0		
R468	1-216-083-00	METAL CHIP	27K	5%	1/10W
R469	1-216-089-91	RES-CHIP	47K	5%	1/10W
		(SE100K,SE200,SE250,SE300,SE400K,SE450,SX100K,SX250D)			
R470	1-216-073-00	METAL CHIP	10K	5%	1/10W
R471	1-216-037-00	METAL CHIP	330	5%	1/10W
R472	1-216-049-91	RES-CHIP	1K	5%	1/10W
R473	1-216-295-91	SHORT	0		
R474	1-216-063-91	RES-CHIP	3.9K	5%	1/10W
R475	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R476	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R477	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R478	1-216-077-91	RES-CHIP	15K	5%	1/10W
R479	1-216-089-91	RES-CHIP	47K	5%	1/10W
					(SE300)
R500	1-216-041-00	METAL CHIP	470	5%	1/10W
R501	1-216-041-00	METAL CHIP	470	5%	1/10W
R502	1-216-041-00	METAL CHIP	470	5%	1/10W
R510	1-249-407-11	CARBON	150	5%	1/4W F
		(SE100,SE200G/V1/V2,SE300G,SE400K,SE450K,SX100K)			
R510	1-249-408-11	CARBON	180	5%	1/4W F
		(SE250,SE200I,SE300D1/D2,SE450B/D/P,SX250D)			
R511	1-249-407-11	CARBON	150	5%	1/4W F
R512	1-216-022-00	METAL CHIP	75	5%	1/10W
R514	1-216-037-00	METAL CHIP	330	5%	1/10W
R515	1-216-049-91	RES-CHIP	1K	5%	1/10W
R516	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R517	1-216-022-00	METAL CHIP	75	5%	1/10W
R541	1-216-025-91	RES-CHIP	100	5%	1/10W
		(SE250,SE200I,SE300D1/D2,SE450B/D/P,SX250D)			

MA-372

Ref. No.	Part No.	Description				Remarks
R542	1-249-408-11	CARBON	180	5%	1/4W	F
		(SE250,SE200I,SE300D1/D2,SE450B/D/P,SX250D)				
R543	1-249-407-11	CARBON	150	5%	1/4W	F
		(SE250,SE200I,SE300D1/D2,SE450B/D/P,SX250D)				
R545	1-216-085-00	METAL CHIP	33K	5%	1/10W	
		(SE250,SE300,SE450B/D/P,SX250D)				
R546	1-216-089-91	RES-CHIP	47K	5%	1/10W	
		(SE250,SE300,SE450B/D/P,SX250D)				
R547	1-216-049-91	RES-CHIP	1K	5%	1/10W	
		(SE250,SE300D1/D2,SE450B/D/P,SX250D)				
R548	1-216-022-00	METAL CHIP	75	5%	1/10W	
		(SE250,SE300,SE450B/D/P,SX250D)				
R549	1-216-022-00	METAL CHIP	75	5%	1/10W	
		(SE250,SE300D1/D2,SE450B/D/P,SX250D)				
R570	1-216-041-00	METAL CHIP	470	5%	1/10W	
		(SE250,SE300,SE450B/D/P,SX250D)				
R571	1-216-041-00	METAL CHIP	470	5%	1/10W	
		(SE250,SE300,SE450B/D/P,SX250D)				
R572	1-216-041-00	METAL CHIP	470	5%	1/10W	
		(SE250,SE300D1/D2,SE450B/D/P,SX250D)				
R574	1-216-097-91	RES-CHIP	100K	5%	1/10W	
		(SE250,SE300D1/D2,SE450B/D/P,SX250D)				
R580	1-216-049-91	RES-CHIP	1K	5%	1/10W	
R581	1-216-065-91	RES-CHIP	4.7K	5%	1/10W	
R582	1-216-073-00	METAL CHIP	10K	5%	1/10W	
		(SE250,SE300,SE450B/D/P,SX250D)				
R583	1-216-073-00	METAL CHIP	10K	5%	1/10W	
		(SE250,SE300D1/D2,SE450B/D/P,SX250D)				
R584	1-216-073-00	METAL CHIP	10K	5%	1/10W	
		(SE250,SE300,SE450B/D/P,SX250D)				
R585	1-216-097-91	RES-CHIP	100K	5%	1/10W	
		(SE250,SE300,SE450B/D/P,SX250D)				
R586	1-216-097-91	RES-CHIP	100K	5%	1/10W	
		(SE250,SE300D1/D2,SE450B/D/P,SX250D)				
R587	1-216-097-91	RES-CHIP	100K	5%	1/10W	
		(SE250,SE300,SE450B/D/P,SX250D)				
R590	1-216-049-91	RES-CHIP	1K	5%	1/10W	
R593	1-216-097-91	RES-CHIP	100K	5%	1/10W	
		(SE250,SE300,SE450B/D/P,SX250D)				
R594	1-216-073-00	METAL CHIP	10K	5%	1/10W	
		(SE250,SE300,SE450B/D/P,SX250D)				
R595	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
		(SE250,SE300,SE450B/D/P,SX250D)				
R596	1-216-077-91	RES-CHIP	15K	5%	1/10W	
		(SE250,SE300,SE450B/D/P,SX250D)				
R600	1-249-417-11	CARBON	1K	5%	1/4W	F
R601	1-249-417-11	CARBON	1K	5%	1/4W	F
R602	1-216-089-91	RES-CHIP	47K	5%	1/10W	
R603	1-216-452-11	METAL OXIDE	180	5%	2W	
R604	1-216-065-91	RES-CHIP	4.7K	5%	1/10W	
R605	1-216-065-91	RES-CHIP	4.7K	5%	1/10W	
R606	1-216-069-00	METAL CHIP	6.8K	5%	1/10W	
R607	1-216-053-00	METAL CHIP	1.5K	5%	1/10W	
R608	1-249-414-11	CARBON	560	5%	1/4W	F
R609	1-247-815-91	CARBON	220	5%	1/4W	
R610	1-247-815-91	CARBON	220	5%	1/4W	
R611	1-216-049-91	RES-CHIP	1K	5%	1/10W	
		(SE250,SE300,SE450B/D/P,SX250D)				
R613	1-215-907-11	METAL OXIDE	22	5%	3W	
R614	1-215-857-11	METAL OXIDE	10	5%	1W	
R615	1-216-047-91	RES-CHIP	820	5%	1/10W	
		(SE250,SE300,SE450B/D/P,SX250D)				
R617	1-216-049-91	RES-CHIP	1K	5%	1/10W	

Ref. No.	Part No.	Description				Remarks
R618	1-216-055-00	METAL CHIP	1.8K	5%	1/10W	
R622	1-260-297-11	CARBON	2.7	5%	1/2W	
R623	1-260-073-11	CARBON	5.6	5%	1/2W	
R624	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R625	1-216-065-91	RES-CHIP	4.7K	5%	1/10W	
R626	1-216-049-91	RES-CHIP	1K	5%	1/10W	
R660	1-216-049-91	RES-CHIP	1K	5%	1/10W	
R661	1-216-121-91	RES-CHIP	1M	5%	1/10W	
R662	1-216-041-00	METAL CHIP	470	5%	1/10W	
R663	1-216-053-00	METAL CHIP	1.5K	5%	1/10W	
R664	1-216-295-91	SHORT	0			
R666	1-216-295-91	SHORT	0			
R667	1-216-037-00	METAL CHIP	330	5%	1/10W	
R668	1-216-025-91	RES-CHIP	100	5%	1/10W	
R669	1-216-025-91	RES-CHIP	100	5%	1/10W	
R670	1-216-041-00	METAL CHIP	470	5%	1/10W	
R671	1-216-295-91	SHORT	0			
R672	1-216-049-91	RES-CHIP	1K	5%	1/10W	
		(SE100K,SE250B,SE400K,SE450B/K,SX100K)				
R673	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R702	1-216-295-91	SHORT	0			
R704	1-216-041-00	METAL CHIP	470	5%	1/10W	
R705	1-216-041-00	METAL CHIP	470	5%	1/10W	
R711	1-212-895-00	FUSIBLE	390	5%	1/4W	
R713	1-216-025-91	RES-CHIP	100	5%	1/10W	
R714	1-216-113-00	METAL CHIP	470K	5%	1/10W	
R723	1-216-097-91	RES-CHIP	100K	5%	1/10W	
R724	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R725	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R726	1-216-097-91	RES-CHIP	100K	5%	1/10W	
R731	1-216-041-00	METAL CHIP	470	5%	1/10W	
		(SE100A1/A2,SE200I/V1/V2,SE250, SE300D1/D2,SE450B/D/P,SX250D)				
R733	1-216-041-00	METAL CHIP	470	5%	1/10W	
		(SE100,SE200I/V1/V2,SE250,SE300D1/D2, SE400K,SE450,SX100K,SX250D)				
R754	1-216-025-91	RES-CHIP	100	5%	1/10W	
R755	1-216-025-91	RES-CHIP	100	5%	1/10W	
R756	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R757	1-216-049-91	RES-CHIP	1K	5%	1/10W	
R800	1-216-101-00	METAL CHIP	150K	5%	1/10W	
		(SE200,SE250,SE300,SE450,SX250D)				
R801	1-216-073-00	METAL CHIP	10K	5%	1/10W	
		(SE200,SE250,SE300,SE450,SX250D)				
R802	1-216-073-00	METAL CHIP	10K	5%	1/10W	
		(SE200,SE250,SE300,SE450,SX250D)				
R803	1-216-081-00	METAL CHIP	22K	5%	1/10W	
		(SE200,SE250,SE300,SE450,SX250D)				
R804	1-216-073-00	METAL CHIP	10K	5%	1/10W	
		(SE200,SE250,SE300,SE450,SX250D)				
R805	1-216-073-00	METAL CHIP	10K	5%	1/10W	
		(SE200,SE250,SE300,SE450,SX250D)				
R806	1-216-073-00	METAL CHIP	10K	5%	1/10W	
		(SE200,SE250,SE300,SE450,SX250D)				
R807	1-216-085-00	METAL CHIP	33K	5%	1/10W	
		(SE200,SE250,SE300,SE450,SX250D)				
R813	1-216-073-00	METAL CHIP	10K	5%	1/10W	
		(SE200,SE250,SE300,SE450,SX250D)				
R850	1-216-025-91	RES-CHIP	100	5%	1/10W	
		(SE200,SE250B/D,SE300,SE450B/D/K,SX250D)				

Ref. No.	Part No.	Description			Remarks
R851	1-216-077-91	RES-CHIP	15K	5%	1/10W
		(SE200,SE250B/D,SE300,SE450B/D/K,SX250D)			
R852	1-216-081-00	METAL CHIP	22K	5%	1/10W
		(SE200,SE250B/D,SE300,SE450B/D/K,SX250D)			
R853	1-216-049-91	RES-CHIP	1K	5%	1/10W
		(SE200,SE250B/D,SE300,SE450B/D/K,SX250D)			
R856	1-216-097-91	RES-CHIP	100K	5%	1/10W
		(SE200,SE250B/D,SE300,SE450B/D/K,SX250D)			
R857	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
		(SE200,SE250B/D,SE300,SE450B/D/K,SX250D)			
R858	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
		(SE200,SE250B/D,SE300,SE450B/D/K,SX250D)			
R859	1-216-123-11	METAL CHIP	1.2M	5%	1/10W
		(SE200,SE250B/D,SE300,SE450B/D/K,SX250D)			
R860	1-216-123-11	METAL CHIP	1.2M	5%	1/10W
		(SE200,SE250B/D,SE300,SE450B/D/K,SX250D)			
R861	1-216-117-00	METAL CHIP	680K	5%	1/10W
		(SE200,SE250B/D,SE300,SE450B/D/K,SX250D)			
R862	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
		(SE200,SE250B/D,SE300,SE450B/D/K,SX250D)			
R968	1-216-101-00	METAL CHIP	150K	5%	1/10W
					(SE250B,SE450B)
R969	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
					(SE250B,SE450B)
R970	1-216-085-00	METAL CHIP	33K	5%	1/10W
					(SE250B,SE450B)
R971	1-216-085-00	METAL CHIP	33K	5%	1/10W
					(SE250B,SE450B)
R972	1-216-083-00	METAL CHIP	27K	5%	1/10W
					(SE250B,SE450B)
R973	1-216-105-91	RES-CHIP	220K	5%	1/10W
					(SE250B,SE450B)
R974	1-216-081-00	METAL CHIP	22K	5%	1/10W
					(SE250B,SE450B)
R975	1-216-295-91	SHORT	0		
					(SE250B,SE450B)
R976	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
					(SE250B,SE450B)
R977	1-216-089-91	RES-CHIP	47K	5%	1/10W
					(SE250B,SE450B)
R978	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
					(SE250B,SE450B)
R979	1-216-073-00	METAL CHIP	10K	5%	1/10W
					(SE250B,SE450B)
R980	1-216-097-91	RES-CHIP	100K	5%	1/10W
					(SE250B,SE450B)
R981	1-216-083-00	METAL CHIP	27K	5%	1/10W
					(SE250B,SE450B)
R982	1-216-089-91	RES-CHIP	47K	5%	1/10W
					(SE250B,SE450B)
R983	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
					(SE250B,SE450B)
R985	1-216-041-00	METAL CHIP	470	5%	1/10W
					(SE250B,SE450B)
R986	1-216-089-91	RES-CHIP	47K	5%	1/10W
					(SE250B,SE450B)
R988	1-216-073-00	METAL CHIP	10K	5%	1/10W
					(SE250B,SE450B)
R989	1-216-049-91	RES-CHIP	1K	5%	1/10W
					(SE250B,SE450B)
R990	1-216-295-91	SHORT	0 (SE250B,SE450B)		
R993	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
					(SE250B,SE450B)
R994	1-216-689-11	METAL CHIP	39K	0.5%	1/10W
					(SE250B,SE450B)
R995	1-216-073-00	METAL CHIP	10K	5%	1/10W
					(SE250B,SE450B)
R996	1-216-689-11	METAL CHIP	39K	0.5%	1/10W
					(SE250B,SE450B)
R997	1-216-073-00	METAL CHIP	10K	5%	1/10W
					(SE250B,SE450B)
R998	1-216-073-00	METAL CHIP	10K	5%	1/10W
					(SE250B,SE450B)
R999	1-216-295-91	SHORT	0 (SE250B,SE450B)		
		< SWITCH >			
S100	1-771-155-11	SWITCH, ROTARY			
S101	1-571-958-11	SWITCH, PUSH (1 KEY)			
S460	1-771-410-21	SWITCH, TACT			
		(SE100,SE200,SE250,SE400K,SE450,SX100K,SX250D)			
S461	1-771-410-21	SWITCH, TACT			
		(SE100,SE200,SE250,SE400K,SE450,SX100K,SX250D)			
S462	1-771-410-21	SWITCH, TACT			
S463	1-771-410-21	SWITCH, TACT			
S464	1-771-410-21	SWITCH, TACT			
S467	1-571-588-11	SWITCH, SLIDE			
		(SE100K,SE200,SE250,SE300,SE400K,SE450,SX100K,SX250D)			
S470	1-771-410-21	SWITCH, TACT			
S471	1-771-410-21	SWITCH, TACT			
S473	1-771-410-21	SWITCH, TACT			
S474	1-771-410-21	SWITCH, TACT			
S476	1-771-410-21	SWITCH, TACT			
S477	1-771-410-21	SWITCH, TACT			
S478	1-771-410-21	SWITCH, TACT	(SE300)		
		< TRANSFORMER >			
T380	1-433-479-11	TRANSFORMER, BIAS OSCILLATION			
		< TUNER >			
TU700	1-693-435-41	TUNER, IF (BTF-3MC445) (SE250B,SE450B)			
TU700	1-693-433-51	TUNER, IF (BTF-3MC404)			
		(SE200V1/V2/I,SE250D/P,SE300D1/D2,SE450D/P,SX250D)			
TU700	1-693-432-11	TUNER, IF (BTF-2MU601) (SE200G,SE300G)			
TU701	1-693-480-11	TUNER, IF (BTF-2MC422)			
		(SE100A1/A2/K,SE200V1/V2,SE400K,SE450K,SX100K)			
		< VIBRATOR >			
X160	1-579-463-11	VIBRATOR, CRYSTAL (32.768kHz)			
X161	1-781-717-21	VIBRATOR, CRYSTAL (17.734MHz)			
X200	1-579-608-21	VIBRATOR, CRYSTAL (4.433MHz)			

POWER BLOCK

Ref. No.	Part No.	Description		Remarks
⚠	1-468-459-11	POWER BLOCK		
		**********		
			(Ref.No.:1,000 Series)	
		< CAPACITOR >		
⚠C001	9-885-001-95	PLASTIC FILM CAPACITOR	0.047uF	250V
⚠C002	9-885-001-96	PLASTIC FILM CAPACITOR	0.1uF	250V
C003	9-885-001-97	ELECTROLYTIC CAPACITOR	47uF	400V
⚠C004	9-885-001-98	CERAMIC CAPACITOR	3300pF	250V
⚠C005	9-885-001-98	CERAMIC CAPACITOR	3300pF	250V
⚠C006	9-885-001-99	CERAMIC CAPACITOR	470pF	250V
⚠C007	9-885-001-99	CERAMIC CAPACITOR	470pF	250V
C102	1-126-964-91	ELECTROLYTIC CAPACITOR	10uF	50V
C103	9-885-002-00	CERAMIC CAPACITOR	470pF	50V
C104	9-885-002-01	PLASTIC FILM CAPACITOR	1.5nF 5%	50V
C105	9-885-002-02	PLASTIC FILM CAPACITOR	220nF	63V
C106	9-885-002-03	PLASTIC FILM CAPACITOR	100nH	83V
C107	1-128-965-91	ELECTROLYTIC CAPACITOR	22uF	50V
C201	1-126-968-91	ELECTROLYTIC CAPACITOR	100uF	50V
C301	9-880-907-01	ELECTROLYTIC CAPACITOR	820uF	25V
C302	1-126-968-91	ELECTROLYTIC CAPACITOR	100uF	50V
C303	9-885-002-04	PLASTIC FILM CAPACITOR	10nF	83V
C401	9-880-908-01	ELECTROLYTIC CAPACITOR	820uF	16V
C402	1-126-925-91	ELECTROLYTIC CAPACITOR	470uF	10V
C403	9-885-002-04	PLASTIC FILM CAPACITOR	10nF	83V
C501	1-126-960-91	ELECTROLYTIC CAPACITOR	1uF	50V
C601	9-880-909-01	ELECTROLYTIC CAPACITOR	330uF	25V
		< CONNECTOR >		
CN001	1-580-230-11	CONNECTOR	2 P	
CN101	1-784-642-11	CONNECTOR	11 P	
		< DIODE >		
D001	9-885-002-05	DIODE		
D002	9-885-002-05	DIODE		
D003	9-885-002-05	DIODE		
D004	9-885-002-05	DIODE		
D101	9-885-002-06	DIODE		
D102	9-885-002-07	DIODE		
D103	9-885-002-05	DIODE		
D104	9-885-002-06	DIODE		
D201	9-885-002-05	DIODE		
D301	9-880-915-01	DIODE		
D401	9-885-002-08	DIODE		
D601	9-885-002-07	DIODE		
		< FUSE >		
⚠F001	9-884-454-01	FUSE	2A/250V	
		< IC >		
IC101	9-885-002-09	IC uC3844A		
IC501	9-880-920-01	IC KA431AETA		

Ref. No.	Part No.	Description		Remarks
		< COIL >		
⚠L001	9-885-002-10	LINE FILTER	60uH	3.0A
⚠L002	9-885-002-11	LINE FILTER	26mH	0.4A
L101	9-885-002-12	FERRITE BEAD INDUCTOR		
L201	9-885-002-12	FERRITE BEAD INDUCTOR		
L301	9-885-002-13	CHOKE	3.3uH	2.2A
L302	9-885-002-12	FERRITE BEAD INDUCTOR		
L401	9-885-001-13	CHOKE	3.3uH	2.2A
		< ISOLATOR >		
⚠PC101	9-880-921-01	OPTOISOLATOR		
		< TRANSISTOR >		
⚠Q101	9-880-922-01	POWER FET		
Q102	9-885-002-14	TRANSISTOR		
		< RESISTOR >		
⚠R001	9-885-002-15	CARBON FILM RESISTOR	2M	0.5W
R101	1-247-882-91	CARBON FILM RESISTOR	130K	0.25W
R102	1-247-882-91	CARBON FILM RESISTOR	130K	0.25W
R103	1-247-882-91	CARBON FILM RESISTOR	130K	0.25W
R104	1-247-882-91	CARBON FILM RESISTOR	130K	0.25W
R105	9-885-002-16	METAL FILM RESISTOR	4.7	0.5W
R107	9-885-002-17	METAL FILM RESISTOR	0.75	0.5W
R110	1-214-761-11	METAL FILM RESISTOR 22K	1%	0.25W
R111	1-247-855-91	CARBON FILM RESISTOR	10K	0.25W
R112	1-247-831-91	CARBON FILM RESISTOR	1K	0.25W
R113	1-247-807-91	CARBON FILM RESISTOR	100	0.25W
R201	1-247-879-91	CARBON FILM RESISTOR	100	0.25W
R218	1-247-839-91	CARBON FILM RESISTOR	2.2K	0.25W
R301	1-247-829-91	CARBON FILM RESISTOR	820	0.25W
R501	1-214-729-11	METAL FILM RESISTOR 1K	1%	0.25W
R502	9-885-002-18	METAL FILM RESISTOR 1.4K	1%	0.25W
R503	1-247-799-91	CARBON FILM RESISTOR	47	0.25W
R504	1-247-851-91	CARBON FILM RESISTOR	6.8K	0.25W
R505	1-247-837-91	CARBON FILM RESISTOR	1.8K	0.25W
R601	1-247-879-91	CARBON FILM RESISTOR	100K	0.25W
		< TRANSFORMER >		
⚠T101	9-885-002-19	SWITCHING TRANSFORMER		
		< VARISTOR >		
⚠Z001	9-880-923-01	METALOXID-VARISTOR	750V	D=10
		< ZENER DIODE >		
ZD101	9-880-924-01	ZENER DIODE	0.4W	5.1V
ZD102	9-885-002-20	ZENER DIODE	0.4W	27V
ZD103	9-880-926-01	VOLTAGE SUPRESSOR 600W	350V	

Note : The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Ref. No.	Part No.	Description	Remarks
		MISCELLANEOUS	
		**********	
⚠19	1-777-854-21	CORD, POWER	
53	1-792-019-11	CABLE, FLAT (FFM-36)	
54	1-792-018-11	CABLE, FLAT (FAC-8)	
⚠56	1-468-459-11	POWER BLOCK	
704	1-500-144-11	HEAD, FE	
832	1-766-723-21	CONNECTOR, BOARD TO BOARD 3P	
M901	1-774-359-11	DRUM ASSY, DZH-78E-R (SE100V1/V2/K,SE200V1/V2,SE250B,SX100K)	
M901	1-774-361-11	DRUM ASSY, DZH-92D-R (SE200G/I,SE250D/P,SE300D1/D2/G,SX250D)	
M901	1-774-362-11	DRUM ASSY, DZH-93D-R (SE400K,SE450B/D/K/P)	
M902	1-698-971-11	MOTOR, DC (CAPSTAN)	
M903	1-541-309-11	MOTOR, L (RF-370C) (LOADING)	
		ACCESSORIES & PACKING MATERIALS	
		**********	
	1-418-008-11	COMMANDER, STANDARD (RMT-V257) (SE100A1/A2/K,SE200V1/V2,SX100K)	
	1-418-008-21	COMMANDER, STANDARD(RMT-V257A) (SE250B)	
	1-418-008-31	COMMANDER, STANDARD(RMT-V257B) (SE200G/I/D/P,SE450D/P/K,SX250D)	
	1-418-008-41	COMMANDER, STANDARD(RMT-V257C) (SE450B)	
	1-418-781-11	COMMANDER, STANDARD (RMT-V287) (SE300D1/D2/G)	
	1-696-593-11	CORD, CONNECTION (PAL)	
⚠	1-770-019-11	ADAPTOR, CONVERSION PLUG 3P (SE200G/I,SE300G)	
	3-709-433-01	COVER, REMOTE CONTROL BATTERY (FOR RMT-V257,V257A,V257B,V257C,V287)	
	3-868-342-11	MANUAL, INSTRUCTION (FRENCH) (SE100A1,SE100V1,SE200D,SE300D1,SE450D)	
	3-868-342-21	MANUAL, INSTRUCTION (SPANISH) (SE100A2,SE250P,SE300D2,SE450P,SX250D)	
	3-868-342-31	MANUAL, INSTRUCTION (GERMAN) (SE100A1,SE200V1,SE250D,SE300D1,SE450D,SX250D)	
	3-868-342-41	MANUAL, INSTRUCTION (ITALIAN) (SE100A,SE200V1,SE250D,SE300D1,SE450D/P)	
	3-868-342-51	MANUAL, INSTRUCTION (DUTCH) (SE100A1,SE200V1,SE300D1,SE450D)	
	3-868-342-61	MANUAL, INSTRUCTION (PORTUGUESE) (SE100A1,SE300D2,SE450D)	
	3-868-342-71	MANUAL, INSTRUCTION (GREEK) (SE100A1,SE200V2,SE450P)	
	3-868-343-11	MANUAL, INSTRUCTION (SWEDISH) (SE100A1,SE200V2,SE300D2,SX250D)	
	3-868-343-21	MANUAL, INSTRUCTION (DANISH) (SE100A2,SE200V2,SE300D2,SX250D)	
	3-868-343-31	MANUAL, INSTRUCTION (FINNISH) (SE100A2,SE200V2,SE300D2,SX250D)	
	3-868-344-11	MANUAL, INSTRUCTION (ENGLISH) (SE100K,SE400K,SE450K,SX100K)	
	3-868-344-21	MANUAL, INSTRUCTION (CZECH) (SE100K,SE400K,SE450K,SX100K)	
	3-868-344-31	MANUAL, INSTRUCTION (POLISH) (SE100K,SE400K,SE450K,SX100K)	
	3-868-344-41	MANUAL, INSTRUCTION (HUNGARIAN) (SE100K,SE400K,SE450K,SX100K)	
	3-868-344-51	MANUAL, INSTRUCTION (RUSSIAN) (SE100K,SE400K)	
	3-868-345-11	MANUAL, INSTRUCTION (ENGLISH) (SE200G/I,SE300G)	
	3-868-346-11	MANUAL, INSTRUCTION (FRENCH) (SE250B,SE450B)	
		**********	
		HARDWARE LIST	
		**********	
#1	7-685-648-79	SCREW +BVTP 3X12 TYPE2	
#701	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
#702	7-682-147-01	SCREW +P 3X6	
#703	7-685-133-19	SCREW (DIA. 2.6) (IT3B)	

Note : The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

MEMO

9-921-750-11

Sony Corporation
Home Video Division Company

2000B167561-1
Printed in Hungary ©2000.2
Published by Quality Assurance Dept.